

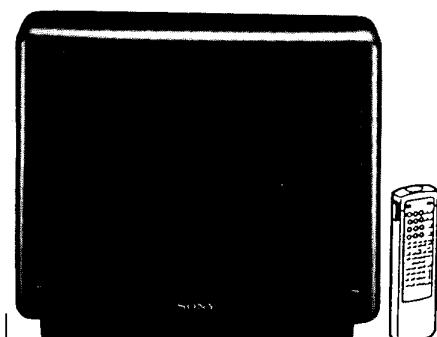
# KV-X2152U

## RM-816

## SERVICE MANUAL

UK Model

Chassis No. SCC-E23R-A



## AE-1C CHASSIS

MODELS OF THE SAME SERIES	
KV-X2152U	KV-A2112U/A2512U
KV-C2122U	KV-A2912U
KV-E2522U/E2922U	KV-X21/X25/X2942U

### SPECIFICATIONS

#### [KV-X2152U]

Television system

I

Colour system

PAL, SECAM, NTSC3.58, NTSC4.43

Stereo system

NICAM stereo

Channel coverage

UHF: B21-B69

Picture tube

Hi-Black Trinitron tube

Approx. 54.5 cm (21 inches)

(Approx. 51 cm picture measured diagonally)  
100 ° -degree deflection

Inputs / Outputs Terminals

REAR

21 pin Euro connector  
(CENELEC standard)

- Inputs for audio and video signals
- Inputs for RGB
- Outputs of TV video and audio signals

G-2/-21-pin Euro  
connector

- Inputs for audio and video signals
- Inputs for S-video
- Outputs for video and audio signals  
(selectable)

Audio output(variable)

- phono jacks

FRONT

Video input phono jack

Audio inputs (L,R) phono jacks

S-video Inputs-4pin DIN

Headphone jack : stereo mini jack

Sound output 30 W + 30 W

Power consumption 122 W

Dimensions Approx. 512×449×456 mm (w/h/d)

Weight Approx.24kg

【RM-816】

Remote control system infrared control

Power requirements 3V dc

Dimentions 2 batteries IEC designation

R6 (size AA)

Approx. 75×221×23mm(w/h/d)

Approx. 230g (including batters)

IEC designation R6 batteries (2)

Supplied accessories RM-816 Remote Commander (1)

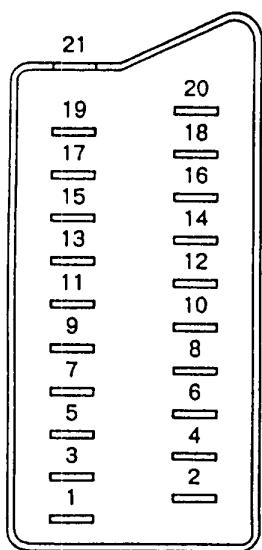
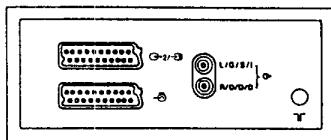
IEC designation R6 batteries (2)

Design and specifications are subject to change without notice.

TRINITRON® COLOUR TV  
SONY®



21 pin connector (-◎, ◎+2/-◎)



Pin No.	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output Impedance: Less than 1kohm*
2	○	○	Audio input B (right)	Standard level: 0.5Vrms Input Impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output Impedance: Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level: 0.5Vrms Input Impedance: More than 10kohms*
7	○	●	Blue input	0.7V ± 3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5 – 12V): Part mode Low state (0 – 2V): TV mode Input Impedance: More than 10kohms Input capacitance: Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V ± 3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	—	Red input	0.7V ± 3dB, 75ohms, positive
	—	○	(S signal) chroma input	0.3V ± 3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1 – 3V) Low state (0 – 0.4V) Input Impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V ± 3dB, 75ohms, positive Sync: 0.3V ( – 3, +10dB)
20	○	—	Video input	1V ± 3dB, 75ohms, positive Sync: 0.3V ( – 3, +10dB)
	—	○	Video Input/Y (S signal)	1V ± 3dB, 75ohms, positive Sync: 0.3V ( – 3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected

● unconnected (open)

\* at 20Hz – 20kHz

4 Pin Connector (■)

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75ohm, positive Sync 0.3V <sup>-3</sup> <sub>+10</sub> dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive

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## (CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

## WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.  
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

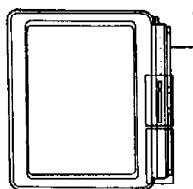
## SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## SECTION 1 GENERAL

### 1-1. SWITCHING ON/OFF

After you have completed the basic preparation your TV is ready to be connected to the mains power supply (240V AC, 50Hz).



#### How to turn the TV on

Action	Result
Press  on the TV.	The TV will turn on. <b>Note:</b> If the screen remains blank, the TV may be in the standby mode. Press  or any number button on the remote commander to switch it on.

#### How to turn the TV off

Action	Result
<b>A Temporarily</b> Press  to enter standby mode.	The TV will be in standby. To return to the TV mode press .
<b>B Completely</b> Press  on the TV.	The TV will turn off.

### 1-2. PRESETTING

After you have installed the TV you need to preset TV channels. TV stations broadcast their channels at certain frequencies. You must preset these channels to programme numbers on the TV before you can watch the TV programmes.

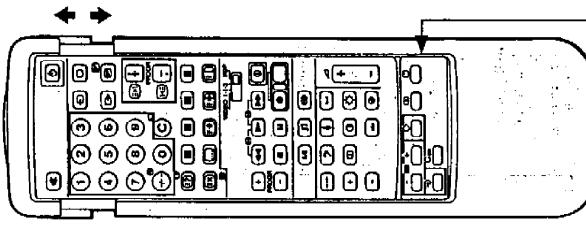
There are 80 spaces for storing these channels.

Slide open the full function side of the remote commander to reveal preset buttons.

#### How to preset channels automatically

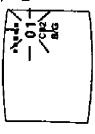
If you are unfamiliar with the channel numbers of the stations you wish to preset, use "How to preset channels automatically". If you are familiar with the channel numbers refer to "How to preset T.V. channels directly".

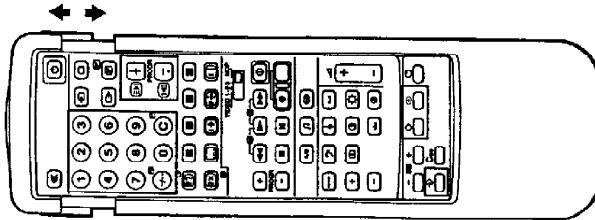
Action	Result
<b>1</b> Press  to enter the preset mode.	
<b>2</b> Press PRGCR + or - or the number buttons to select the programme number to which you want to preset a channel.	
<b>3</b> Press  + or - once to search forward or backward for channels.	
<b>4</b> Press  if you want to store the channel which is turned in.	
<b>Note</b> If you want to skip a channel, press  + or  -.	
<b>5</b> Repeat steps 1 to 4 to store the other channels.	



**Note:** These buttons should be used in preset mode only.

### How to Preset channels directly

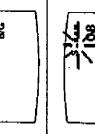
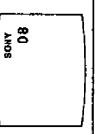
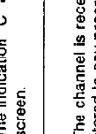
Action	Result
<b>1</b> Press $\rightarrow$ to enter the preset mode.	
<b>2</b> Press PROGR +/ - or the number buttons to select the programme number on which you want to preset a channel.  Note To select a double-digit number, use the $-/-$ button. For example, if you want to choose 23, press $-/-$ , 2, and then 3.	 The programme number changes.

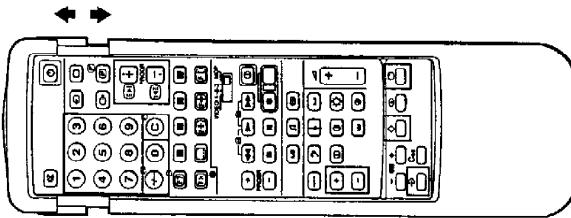


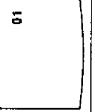
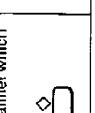
— 5 —

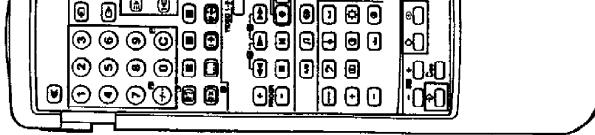
### How to Name a Station

You can use up to five characters to "name" a channel or station (i.e. BBC1).

Action	Result
<b>1</b> Select a programme number you want to name by pressing the PROGR +/- or the number buttons	 The selected programme number will appear.
<b>2</b> Press $\rightarrow$ .	 The programme number starts flashing.
<b>3</b> Press C.	 The first column of the station name indication will start flashing.
<b>4</b> Press + or - to select a letter in the alphabet, a number, or a blank space.	 The letters of the alphabet, numbers and the space (" ") will appear sequentially.
<b>5</b> Press C.	 The first character is now set and the second column will start flashing.
<b>6</b> Repeat steps 4 and 5 to set each letter.	 The channel name "C" starts flashing on the display.
<b>7</b> Press $\diamond$ .	 The channel name "C" is now stored and you have returned to TV mode.
<b>How to tune in a channel temporarily</b>	
You can tune in a channel temporarily, if it has not been preset.	
<b>1</b> Press C.	 The indication "C" appears on the screen.
<b>2</b> Select the channel number with two digits by pressing the number buttons (e.g. for channel 4, first press 0, then 4.)	The channel is received, but it is not stored to any programme number.



Action	Result
<b>1</b> Press $\rightarrow$ to store the channel which is tuned in.	 The channel is now stored and you have returned to TV mode.
<b>2</b> Press $\rightarrow$ to exit the preset mode without storing.	 Repeat steps 1 to 5 to store the other channels.

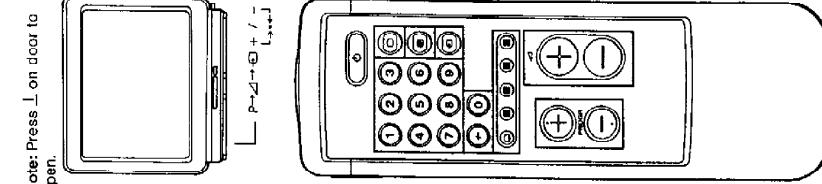


## 1-3. BASIC TV OPERATION

<p><b>How to Skip Programmes</b></p> <p>Using the PROGR +/- buttons you can skip unused programme channel numbers. However, the skipped numbers may still be called up using the number buttons.</p>	
Action	Result
<b>1</b> Press $\Rightarrow$ to enter the preset mode.	The programme number will start flashing. 
<b>2</b> Select the programme number that you want to skip by pressing PROGR +/- or the number buttons.	The programme number changes. 
<b>3</b> Press C <sub>eo</sub> .	The lowest channel number appears under the programme number. 
<b>4</b> Press $\diamond$ .	The channel is now stored and you have returned to TV mode. 
Repeat steps 1 to 4 to skip other programme numbers.	

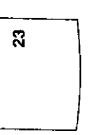
<p><b>How to Fine Tune Manually</b></p> <p>If the picture is distorted, you can fine tune the channel manually.</p>	
Action	Result
Press $\text{EQ}$ + or - repeatedly until the picture looks normal.	The indication $\leftarrow$ F $\rightarrow$ appears on the screen.
Press $\Rightarrow$ to enter the preset mode.	The programme number starts flashing.



This section introduces you to the basic control functions which are available on the simple side of the remote commander.

### How to Select Programmes

Before you can select programmes make sure that you have preset channels.

Action	Result
Press PROGR +/- or the number buttons.	The selected programme is displayed. 

Action	Result
Press $\Delta$ or -	The volume markers will appear and are adjusted accordingly. 

### How to Adjust the Volume

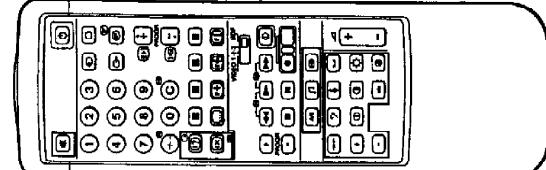
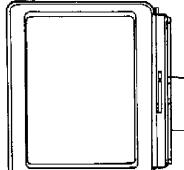
Basic teletext operation

Select	The $\odot$ button to view the teletext.
The $\odot$ button to request subtitles (P. 88).	One of the coloured buttons for fasttext operation.
The $\odot$ button to return to TV mode.	The $\odot$ button to return to TV mode.
<b>How to operate with the buttons on the TV</b>	You can also select programmes and adjust the volume using the $P-\Delta-\odot$ and $\Delta-\odot$ buttons on the front of the TV.
For operation first press the $P-\Delta-\odot$ button repeatedly so that the P (for programme) or $\Delta$ (for volume) indication appears on the screen, and then adjust with the $\Delta-\odot$ buttons.	For operation first press the $P-\Delta-\odot$ button repeatedly so that the P (for programme) or $\Delta$ (for volume) indication appears on the screen, and then adjust with the $\Delta-\odot$ buttons.
<b>Note:</b> To restore to factory set level press $\rightarrow \leftarrow + / -$ together.	<b>Note:</b> To restore to factory set level press $\rightarrow \leftarrow + / -$ together.
<b>How to view the video input picture</b>	Press $\odot$ To return to the TV mode, press $\square$ . For further details.

1-4. ADVANCED TV OPERATION

This section shows you how to use convenient features and how to adjust the picture and sound to your taste. Use the full-function side of the Remote Commander.

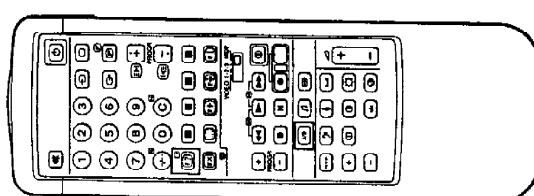
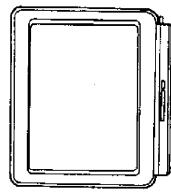
**Use the full-function side of the Remote Commander.**



How to	Action	To resume normal picture/sound
Display on-screen indications	Press  .	Indications disappear after some seconds
Display programme numbers	Press  twice.	Press  twice again.
Mute the sound	Press  .	Press  again.
Select a language in bilingual programmes.	Press  .	The selected mode of the A-C>B indicator on the TV lights up.
Set the sound for music listening	Press  .	Press  again.
	Press  .	Press  again.
	Press  .	Press  again.

## How to use on-screen display and special sound features

You can enjoy the following convenient features.



**How to select the sound of your choice**

Nicarm programmes can be broadcast in two ways. You may select the sound you want to hear in either of these, by pressing the **5** button on the full function side of the remote commander.

## How to select a NICAM broadcast

This Sony TV has been designed to select Nicam broadcasts when available. Whenever a Nicam broadcast is received, the **NICAM** symbol appears briefly on the screen. When the Nicam programme ends, or you switch channels to one without Nicam, the **NICAM** symbol appears. To check if the channel you are watching is receiving Nicam, press the **ON SCREEN DISPLAY** button **G**, on the full function side of the remote Commander.

Service being broadcast	Action	The sound you hear	Indication on the TV A/D/B
Nicam		Stereo Mono (2 channel)	 
	Press A/B	Normally broadcast sound	 

Press A/B again to return to stereo / Mono (2-channel)

Nicam programmes can be broadcast in two ways. You may select the sound you want to hear in either of these, by pressing the **button** on the full function side of the remote commander.

Bilingual		Language A	
	Press A/B	Language B	
Press A/B	language	Normally broadcast	<input type="checkbox"/> <input type="checkbox"/>
			<input type="checkbox"/> <input type="checkbox"/>
Press A/B again to return to language A			

Depending on availability of service

To Adjust:	Press:	Then:	Result: (+ ↔ -)
<b>Picture:</b>			
Colour Intensity	④	+	More ↔ Less
Picture Contrast	⑤	-	More ↔ Less
Brightness	⑥	+	Bright ↔ Dark
<b>Sound:</b>			
Bass	⑦	+	More ↔ Less
Treble	⑧	-	More ↔ Less
Balance	⑨	+	More Right ↔ More Left

Although the picture and sound have been adjusted at the factory, you might want to adjust them to your own taste. To do this, please follow the steps below.

To reset the picture and sound to factory set levels press → ←.

In the set:  
press → ← +/− buttons simultaneously.

## 1-5. TELETEXT OPERATION

TV stations broadcast teletext programmes via the TV channels. To receive teletext programmes, use the buttons indicated in green on the full side of the Remote Commander.

With the simple side of the Remote Commander, only the basic operation is possible.

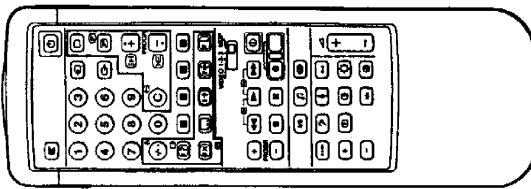
### How to View the Teletext

Action	Result
1 Select the channel which carries the teletext service you wish to see.	The channel changes on the screen.
2 Press <b>②</b>	If the teletext signal is not broadcast, then <b>D00</b> is displayed.
3 Input three digits for the page number using the number buttons. <b>Note</b> If you make a mistake, type in any three digits, then re-enter the correct page number.	The numbers are entered on the screen. The requested page will appear in a few seconds.
To return to the TV mode. Press <b>○</b> .	
To change the teletext channels First press <b>○</b> to return to the TV mode, then repeat steps 1 to 3.	

**Note**  
If the signal of the TV channel is weak, teletext errors may often occur.

### How to Use the Advanced Features of Teletext

How to	Action	Result (On-screen display)
Request the index page.	Press <b>①</b> (INDEX).	The index page appears.
Request the subtitle page (p688).	Press <b>○</b> .	The subtitle page is displayed (p688).
Access the next or preceding page.	Press <b>②</b> (PAGE +) or <b>③</b> (PAGE -). P201	The next or preceding page appears.



TV stations broadcast teletext programmes via the TV channels. To receive teletext programmes, use the buttons indicated in green on the full side of the Remote Commander.

With the simple side of the Remote Commander, only the basic operation is possible.

### How to View the Teletext

How to	Action	Result
Superimpose the teletext display on the TV programme.	Press <b>②</b> once if you are in text mode or press <b>②</b> twice if in TV mode. To return to the normal teletext display, press <b>②</b> again.	The teletext displays are superimposed on the TV programmes.
Prevent a teletext page from being updated or changed.	Press <b>②</b> (HOLD).	The HOLD symbol ( <b>②</b> ) appears on the screen and the chosen sub-page is held until you cancel.
Enlarge the teletext display.	Press <b>②</b> once to enlarge the upper half. Press twice to enlarge the lower half. Press again to restore the normal display.	The upper half is enlarged.
Reveal concealed information (e.g. answers to a quiz).	Press <b>②</b> (REVEAL).	The information is revealed.
Watch the TV programme while waiting for a requested page to be displayed.	1. Request a new page. 2. Press <b>②</b> (TEXT CL).	The numbers are entered.
3. When the requested page has been captured, the page number remains and the other data disappears.	3. Request a new page. 4. Press <b>②</b> to view this page.	The TV programme is displayed, and the requested page number and other teletext data appear at the top of the screen.
Have a requested page displayed at a pre-determined time.	1. Request a desired page. 2. Press <b>②</b> (TP ON).	"TP**" appears at the bottom of the screen.
To cancel the request.	At the requested time, the page number will be displayed at the top of the screen, to view this page, press <b>②</b> .	The requested page is displayed.
To cancel the request.	To cancel the request. Display the teletext page, then press <b>②</b> (TP OFF).	The request is cancelled. To resume TV mode press <b>○</b> .

Some of the features may not be available depending on the Teletext service.

## 1-6. OPTIONAL CONNECTIONS / OPERATIONS

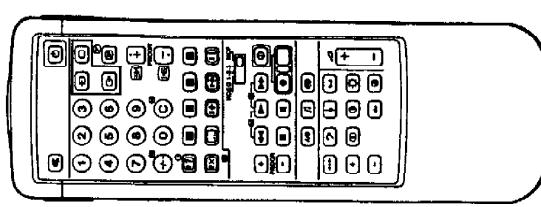
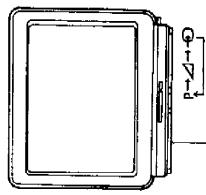
### How to use the FASTEXT Feature

FASTELEX feature allows you to access pages quickly with one key operation. When a FASTEXT page is broadcast, a colour coded menu appears at the bottom of the screen. Each coloured prompt corresponds to the coloured buttons on either side of your Remote Commander.

Operation	Action	Result
	Press one of the coloured buttons which correspond to the coloured prompt on the teletext.	The selected teletext page appears.

#### Note

Correct FASTEXT operation depends on the necessary signals sent from the TV station.



### How to view the video input picture

You can view the picture of video equipment connected to the input terminals by selecting the input mode.

Operation	Action	Result
	Press $\text{C}$ repeatedly to select the desired input.	$\text{E}1$

To return to the TV mode, press the  $\text{C}$  button.

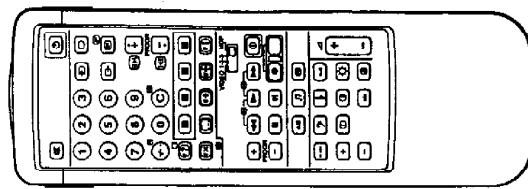
Input modes	Action	Result
$\text{C}1$		Audio/video input through the $\text{A}$ connector.
$\text{C}2$		RGB input through the $\text{A}$ connector.
$\text{C}2/\text{S}$		Audio/video input through the $\text{C}2/\text{S}$ connector.
$\text{S}1$		S video input (from a VTR equipped with an S video output) through the $\text{C}2/\text{S}$ connector.
$\text{C}3$		Audio/video input through $\text{C}3$ and $\text{C}$ jacks on the front (4-pin connector)
$\text{C}3$		S video input through the $\text{C}3$ connector on the front (4-pin connector)

How to select the Output	Action	Result
	Press $\text{C}$ repeatedly to select the desired input.	$\text{C}$

You can also select the input mode using the  $\text{P} \rightarrow \text{C}$  and then press  $\text{+/-}$  buttons to select the input. In this case, first select  $\text{C}$  and then press  $\text{+/-}$  buttons to select the input.

Output modes	Action	Result
$1\text{C}$		Symbol for the selected output appears. (See the table below.)
$2\text{C}$		
$3\text{C}$		
$\text{TV}\text{C}$		

Output modes	Symbol	Output from
$1\text{C}$		The audio/video signal from the $\text{C}1$ connector
$2\text{C}$		The audio/video signal from the $\text{C}2/\text{S}$ connector
$3\text{C}$		The audio/video signal from the $\text{C}3$ connectors.
$\text{TV}\text{C}$		The audio/video signal from the $\text{TV}$ aerial terminal.



## 1-7. ADDITIONAL REMOTE COMMANDER OPERATION

**How to Control Other Sony Video Equipment**  
By switching the VIDEO 1/2/3, MDP selector, you can operate most Sony video equipment (Beta VTR, 8mm VTR, VHS VTR, and video disc player).

- 1 Set VIDEO 1/2/3, MDP selector according to the desired video equipment.
 

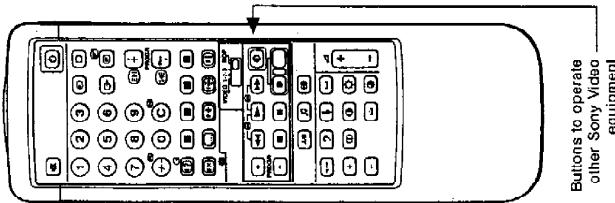
VIDEO 1:	Beta or ED Beta VTR
VIDEO 2:	8mm VTR
VIDEO 3:	VHS VTR
MDP:	Video disc player
- 2 Use the buttons in the indicated area to operate video equipment.

**Note**

When you use • button, be sure to press this button and the one on the right simultaneously.

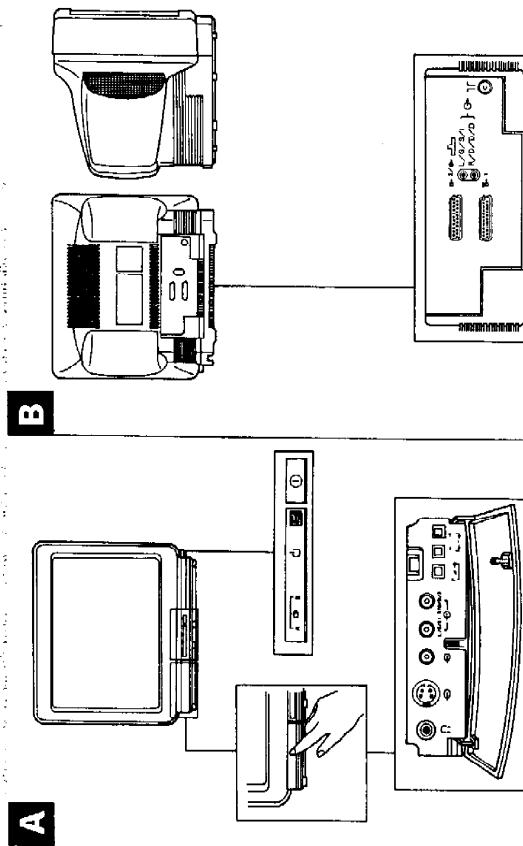
**Notes**

- If your video equipment is furnished with COMMAND MODE selector, set the selector to the same position as the VIDEO 1/2/3, MDP selector on the supplied Remote Commander.
- If the equipment does not have a certain function, the corresponding button on the Remote Commander will not work.



## 1-8. ADDITIONAL INFORMATION

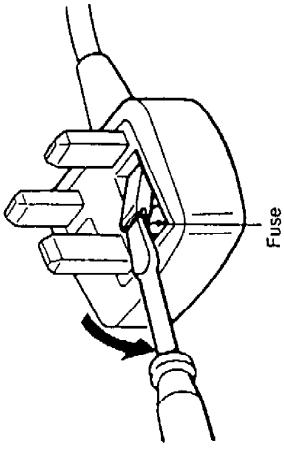
### Parts Identification



This section briefly describes the buttons and controls on the TV set and on the Remote Commander.  
For more information

**• CAUTION**

The flexible mains lead is supplied connected to a B.S. 1363 fused plug having a fuse of 5 amp capacity. Should the fuse need to be replaced, use a 5 AMP FUSE approved by ASTA to BS 1362, i.e., carries the  mark.

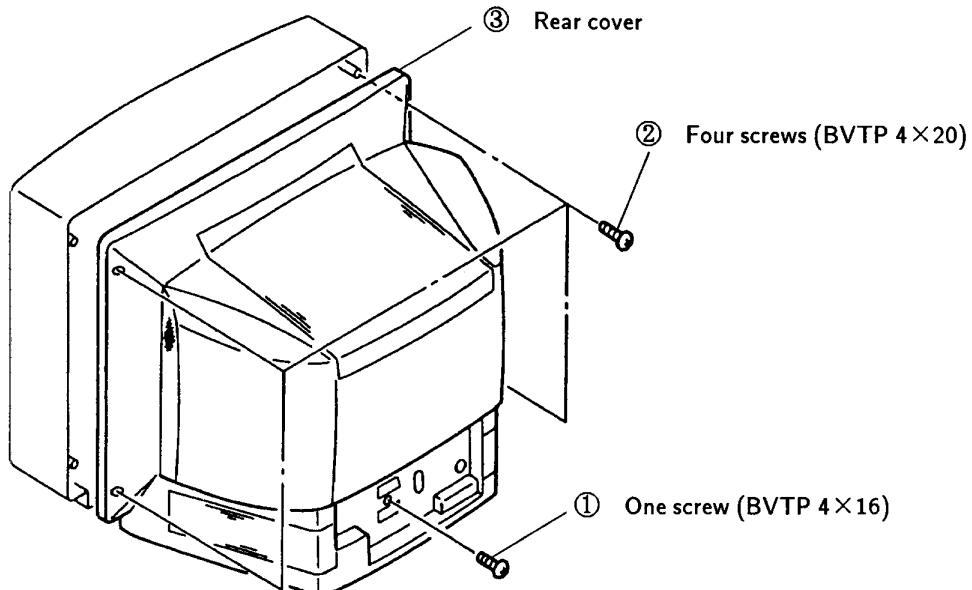


**How to replace the fuse**  
Open the fuse compartment with the blade screwdriver,  
and replace the fuse.

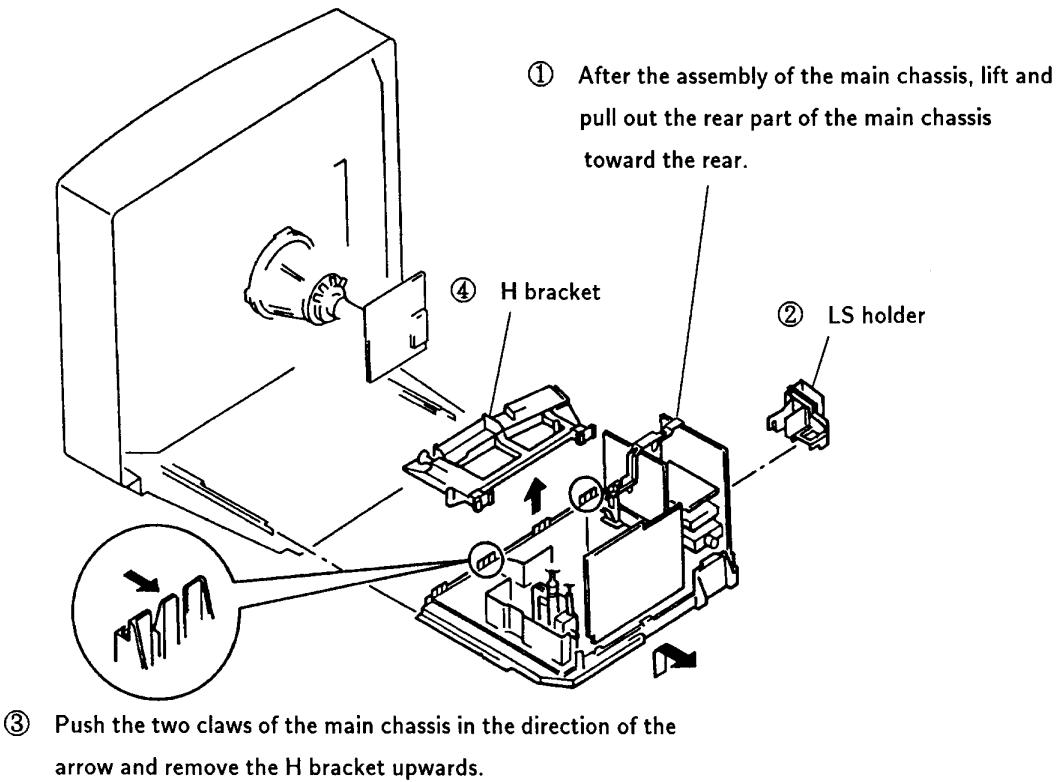
<b>D Remote Commander – full function side</b>	
Sign	Name
	Main power switch
	Standby indicator
A-	NCAM indicators
	Headphones jack (stereo minijack)
-	Input jacks (S-video/Video/audio)
P-	Function selector (Programme/volume/input)
- +	Adjustment buttons for function selector
<b>B TV set – Rear</b>	
Sign	Name
	21-pin Euro-AV connector (S-video/video input, TV/video output)
	21-pin Euro-AV connector (RGB/video input, TV output)
	Audio output jacks (phono jacks)
	Aerial terminal
<b>C Remote Commander – simple side</b>	
Sign	Name
	Input mode selector
	Teletext button
	Fastext buttons
	TV mode selector
	Standby button
1,2,3,4,5, 6,7,8,9, and 0	Number buttons
- + - +	Double-digit entering button
	Volume control buttons
PROGR +/-	Programme selector
	Picture and sound controls
VIDEO 1/2/3/MDP	Video equipment selector
	Video equipment operation buttons
Coo	Programme number clear button
	Channel preset button
- + + -	Tuning buttons
	Channel store button
	Station label button

## SECTION 2 DISASSEMBLY

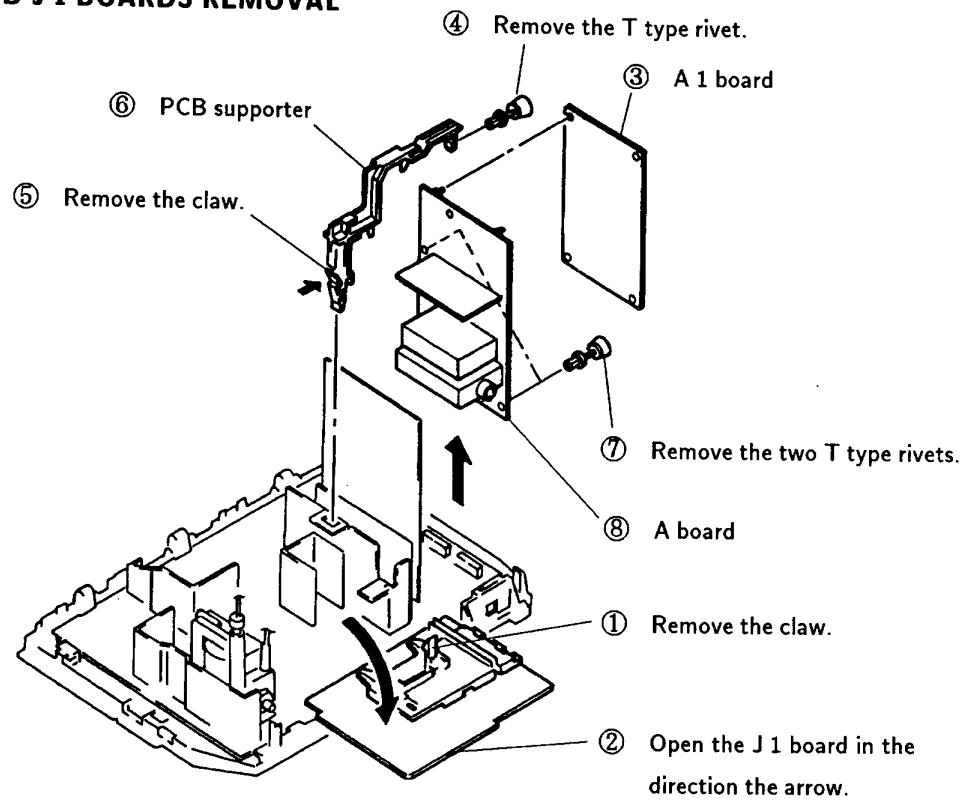
### 2-1. REAR COVER REMOVAL



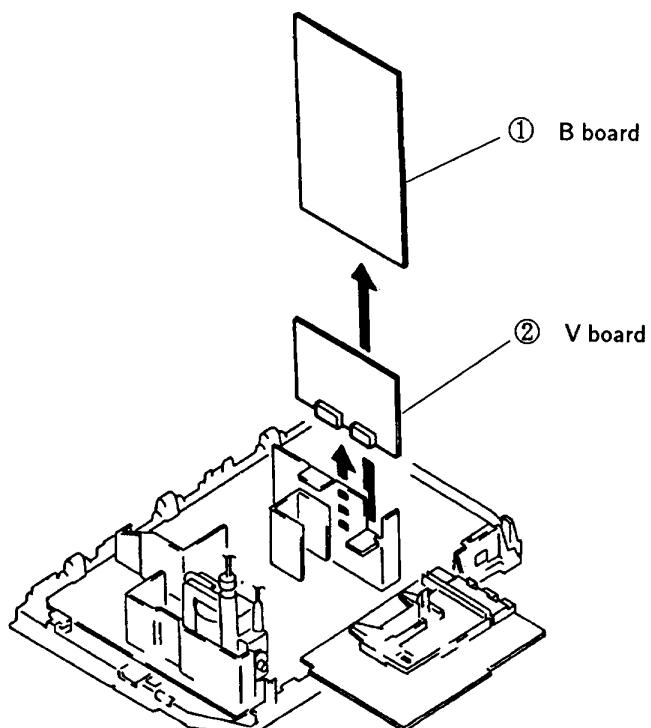
### 2-2. CHASSIS ASSEMBLY REMOVAL



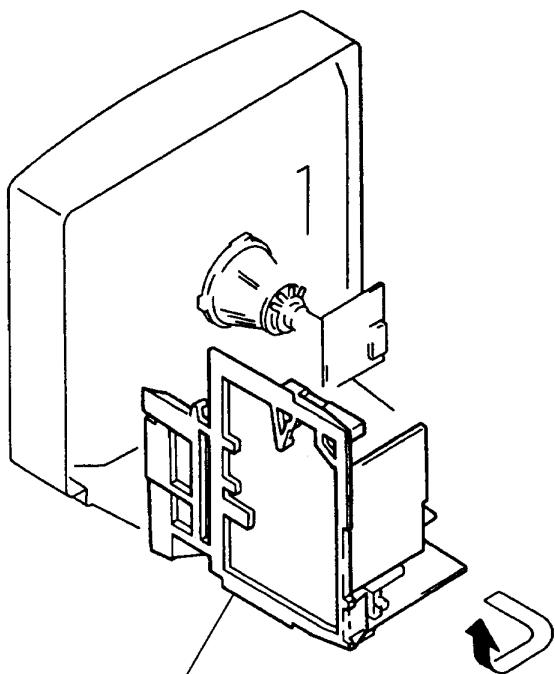
## 2-3. A, A 1 AND J 1 BOARDS REMOVAL



## 2-4. B AND V BOARDS REMOVAL

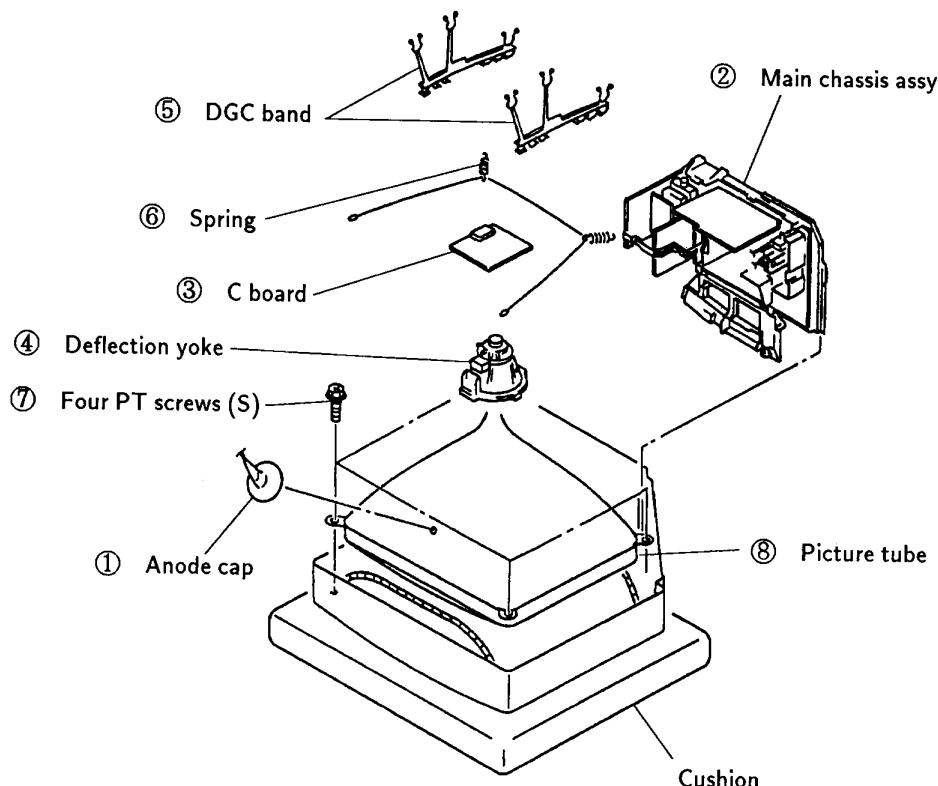


## 2-5. SERVICE POSITION



- ① Remove main chassis assembly  
in the direction of the arrow.

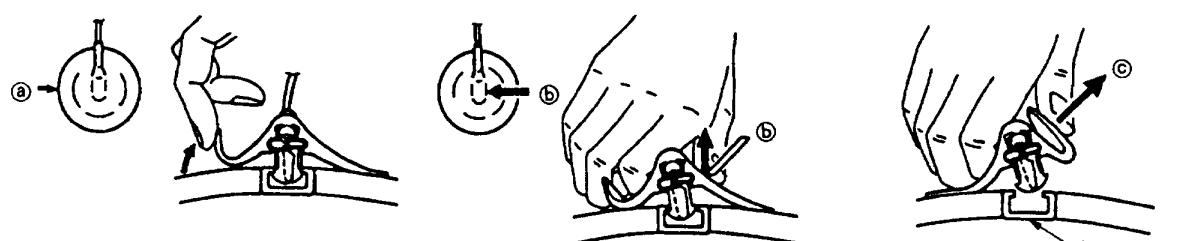
## 2-6. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon painted on the CRT, after removing the anode.

### • REMOVING PROCEDURES



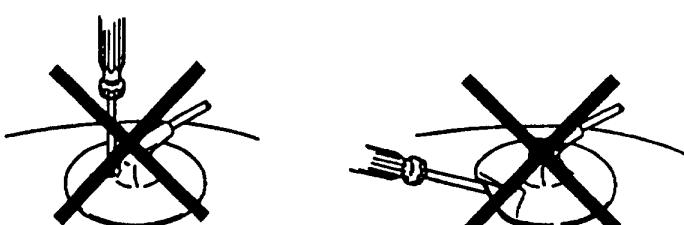
① Turn up one side of the rubber cap in the direction indicated by the arrow ②.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⑤.

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⑥.

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!  
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!  
The shatter-hook terminal will stick out or hurt the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted. The controls and switch below should be set as follows unless otherwise noted :
  - CONTRAST control ..... 80% (or Normal by commander)
  - BRIGHTNESS control ..... 50%

Perform the adjustments in order as follows:

#### **Preparation:**

- Set the side of the unit with the PICTURE TUBE so that it faces east or west in order to reduce the influence of external magnetic force.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser..

#### **3-1. BEAM LANDING**

Demagnetize with a degausser

1. Input a raster signal with the pattern generator.
- CONTRAST      } normal  
BRIGHTNESS    }
2. Turn the raster signal of the pattern generator to red.
3. Move the deflection yoke backward, and adjust with the purity control so that red is in the center and blue and green are at the sides evenly. (Fig.3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes red. (Fig.3-1)
5. Switch over the raster signal to blue and blue and confirm the condition.
6. When the position of the deflection yoke is determined, tighten it with a deflection yoke mounting screw.
7. When landing at the corner is not right, adjust by using the disk magnets. (Fig.3-4)

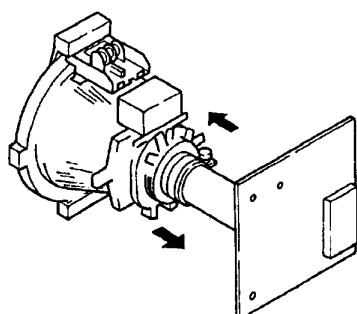


Fig.3-1

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

**Note:** Test Equipment Required.

1. Color bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

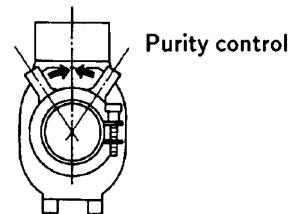


Fig.3-2

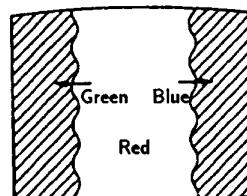


Fig.3-3

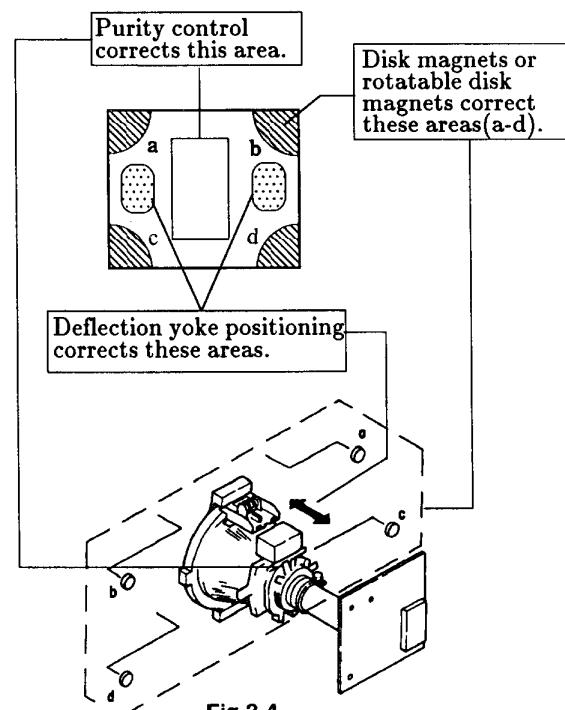


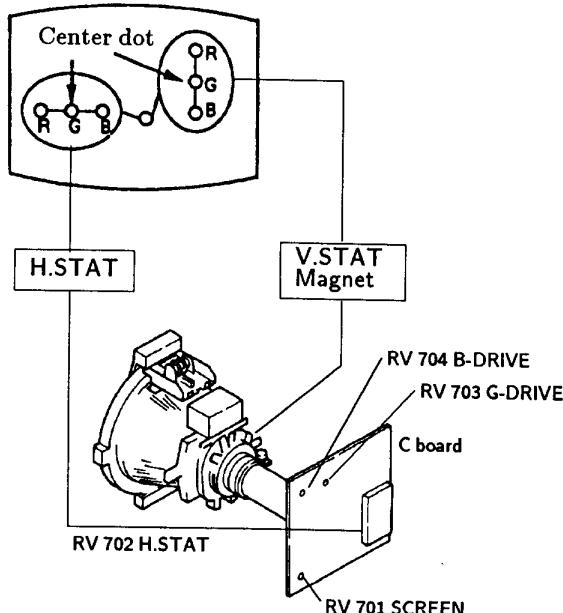
Fig.3-4

### 3-2. CONVERGENCE

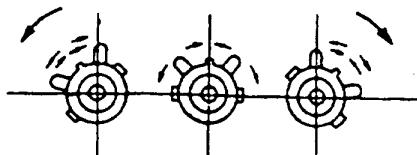
#### Preparation:

- Before starting, perform FOCUS, H.SIZE, and V. SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in the dot pattern.

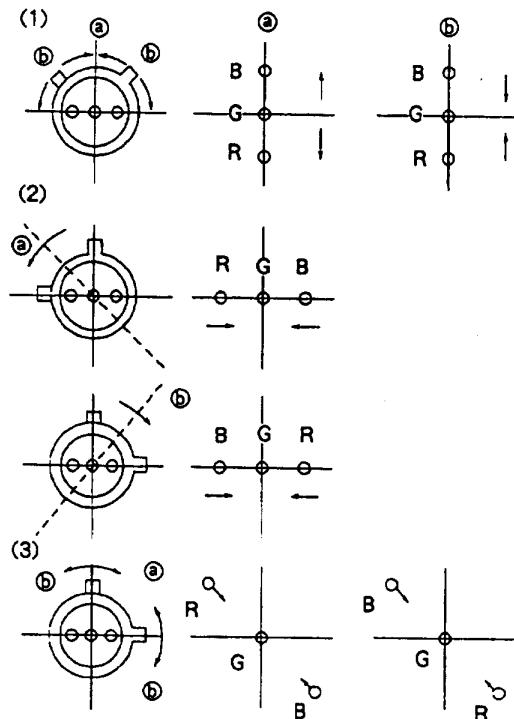
#### (1) Horizontal and Vertical Static Convergence



1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizontal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)
- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



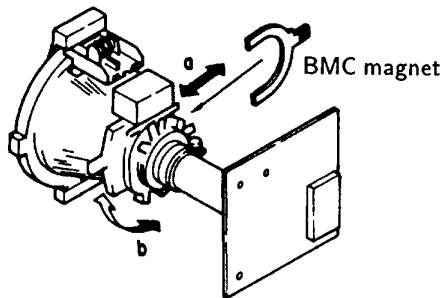
4. When the V.STAT magnet is moved in the direction of arrow ② and ⑤, red, green and blue dots move as shown below.



If the red and blue dot do not converge with green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.  
Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.



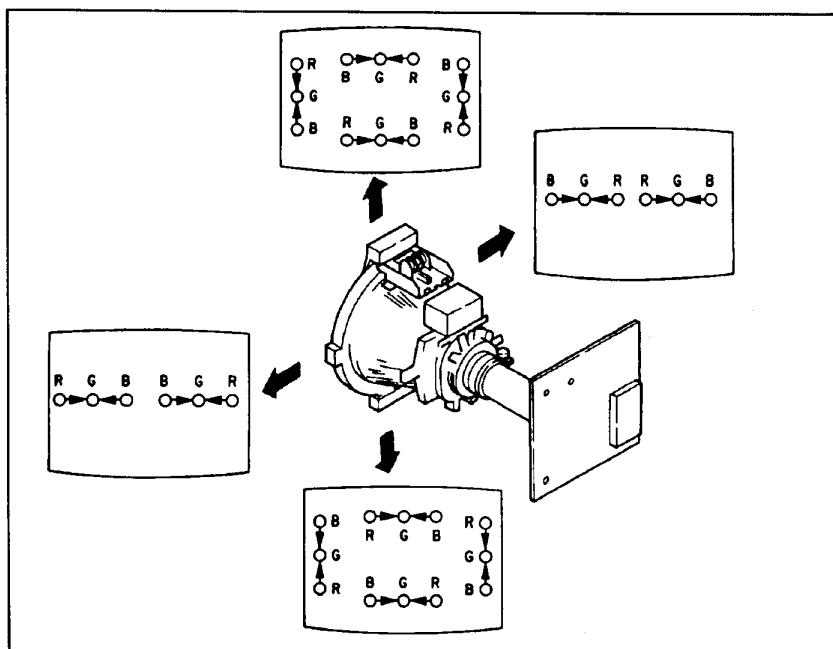
## (2) Dynamic Convergence Adjustment

### Preparation:

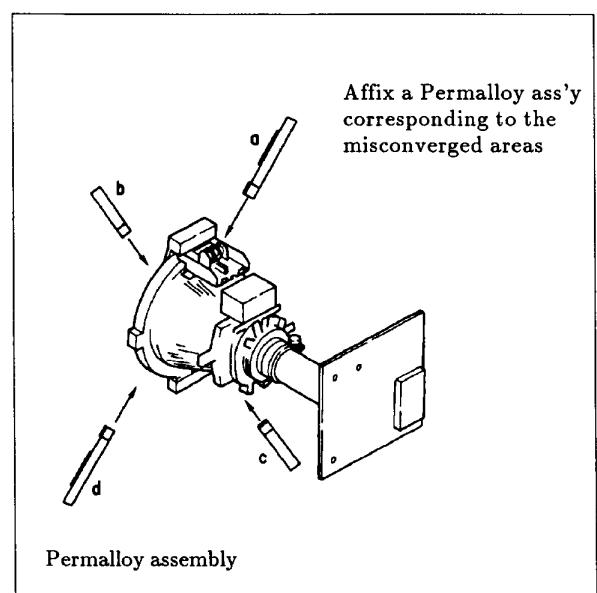
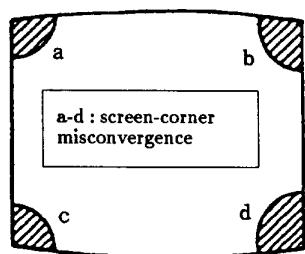
- Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.

3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

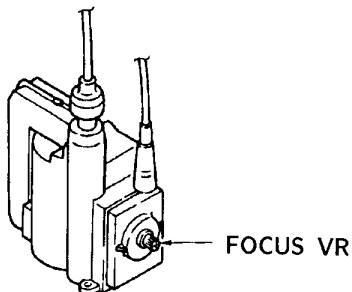


## (3) Screen-corner Convergence



### 3-3. FOCUS

Adjust FOCUS so that the whole screen is in best focus.

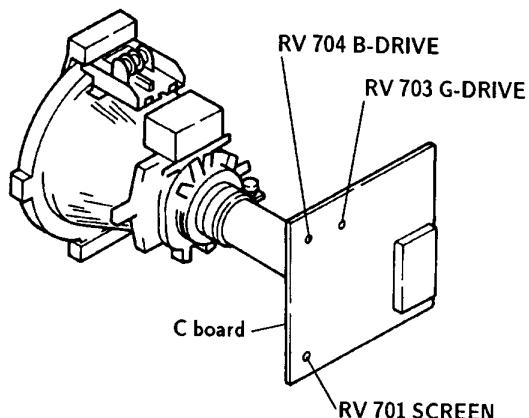


#### White Balance Adjustment

1. Input all-white signal from the pattern generator.
2. Adjust the BRIGHTNESS and COLOR controls to the standard level.
3. Adjust the following using RV 704 (B DRIVE) and RV 703 (G DRIVE)

In the following adjustments, the CONTRAST, COLOR and BRIGHTNESS controls are set to normal unless otherwise specified.

### 3-4. SCREEN (G 2) and WHITE BALANCE

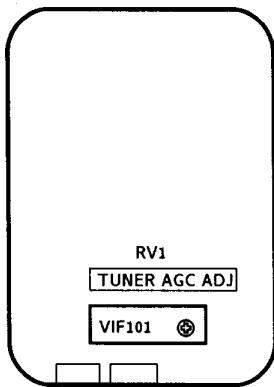


#### Screen (G 2) Setting

1. Input dot signal from the pattern generator.
2. Set the picture BRIGHTNESS control to minimum level.
3. Apply 170 V DC to the cathodes of R,G and B from an external power source.
4. While watching the picture, adjust the G 2 volume (RV701) immediately before fly-back line disappears.

## SECTION 4 CIRCUIT ADJUSTMENTS

### 4-1. A BOARD ADJUSTMENT

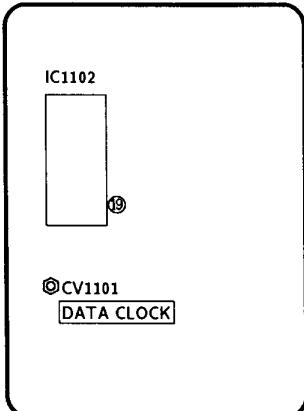


A BOARD (COMPONENT SIDE)

#### TUNER AGC ADJUSTMENT (VIF101, RV1)

1. Align with an appropriate signal between stations.
2. Adjust RV1 so that snow noise and cross modulation just disappear from the picture.

### 4-2. A1 BOARD ADJUSTMENT

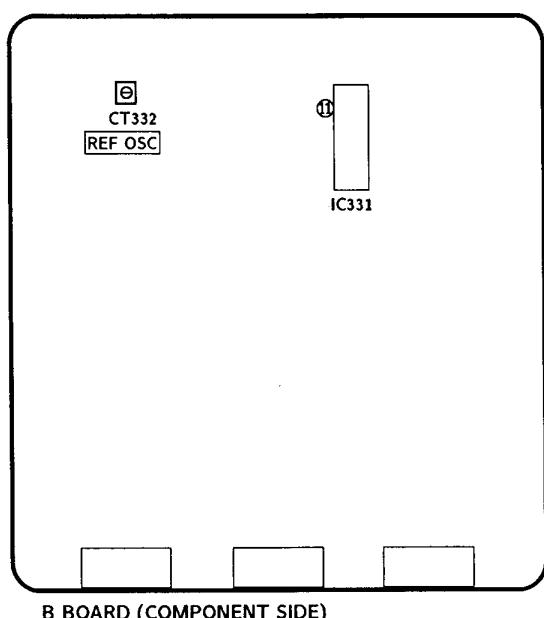


A1 BOARD (COMPONENT SIDE)

#### DATA CLOCK Adjustment (CV1101)

1. Tune in a no signal.
2. Connect a frequency counter to pin ⑩ of IC1102 (PCLK) through a probe of 10:1.
3. Adjust CV1101 (DATA CLOCK) so that frequency becomes  $728.022\text{KHz} \pm 1\text{Hz}$ .

### 4-3. B BOARD ADJUSTMENT

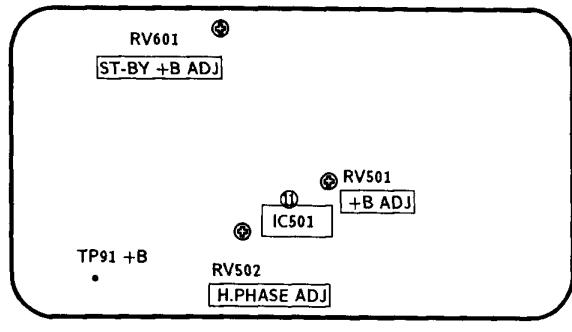


B BOARD (COMPONENT SIDE)

#### REFERENCE OSCILLATOR ADJUSTMENT (CT332 8.8MHz)

1. Input a PAL colour bar signal.
2. Ground pin ⑪ of the IC331.
3. Adjust CT332 to obtain synchronization.

#### 4-4. D BOARD ADJUSTMENTS



D BOARD (COMPONENT SIDE)

##### +B ADJUSTMENT (RV501)

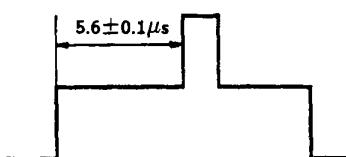
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain  $135 \pm 0.2V$ .

##### ST-BY +B ADJUSTMENT (RV601)

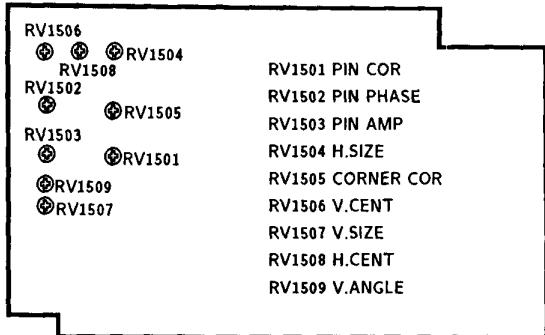
1. Put the system into  $\textcircled{1}$  standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain  $135 \pm 3V$ .
4. Take the system out of  $\textcircled{1}$  standby mode (remote commander).

##### H.PHASE ADJUSTMENT (RV502)

1. Input a PAL colour bar signal.
2. Set the picture and brightness controls to their normal levels.
3. Set RV1508 (H.CENT) to its mechanical center.
4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
5. Rotate RV502 to adjust to  $5.6 \pm 0.1\mu s$ .



#### 4-5. J1 BOARD ADJUSTMENTS

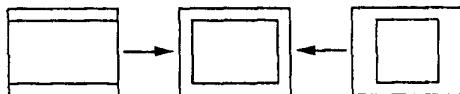


J1 BOARD (COMPONENT SIDE)

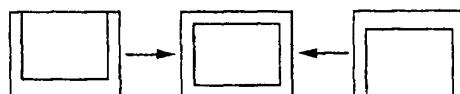
RV1508  
H. CENT (HORIZONTAL CENTER)



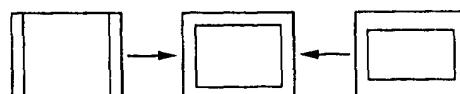
RV1504  
H. SIZE (HORIZONTAL SIZE)



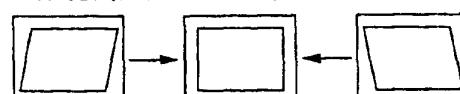
RV1506  
V. CENT (VERTICAL CENTER)



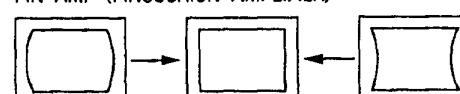
RV1507  
V. SIZE (VERTICAL SIZE)



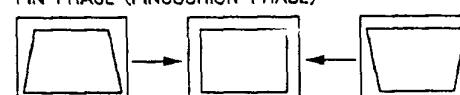
RV1509  
V. ANGLE (VERTICAL ANGLE)



RV1503  
PIN AMP (PIN CUSHION AMPLIFIER)



RV1502  
PIN PHASE (PIN CUSHION PHASE)



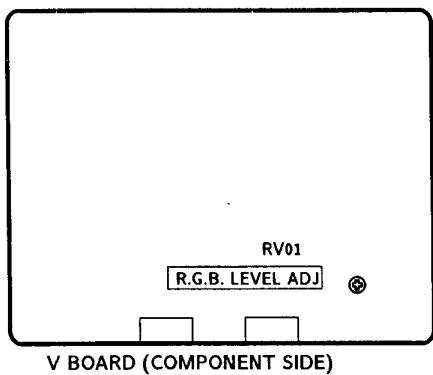
RV1501  
PIN. COR (PIN CUSHION CORRECT)



RV1505  
CORNER. COR (CORNER CORRECT)



#### 4-6. V BOARD ADJUSTMENT



##### RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.

#### 4-7. SECONDARY ADJUSTMENTS

##### SUB BRIGHTNESS ADJUSTMENT

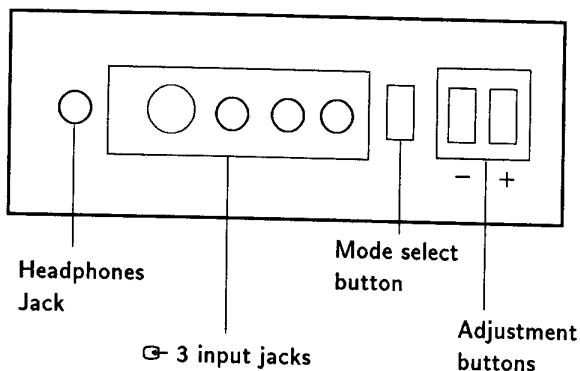
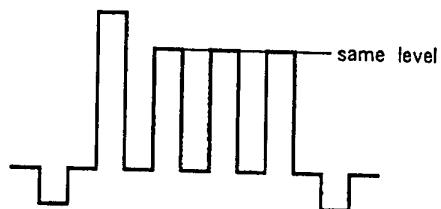
1. Set the system to receive a test pattern.
2. Press  $\rightarrow \cdot \leftarrow$  on the remote commander to put the system into normal mode.
3. Switch off the power.
4. While depressing the adjusting buttons + and - simultaneously, turn on the power. (SUB mode is obtained)
5. Minimize the  $\odot$  contrast setting.
6. Adjust the  $\diamond$  brightness control so that the gray scale 0 IRE section is cut off completely and the 20 IRE section is barely glowing.
7. Depress the  $\diamond$  (store) button of the remote commander.  
(SUB mode is released)

If there is no test colour pattern

1. Set the system to receive a colour pattern.
2. Press  $\rightarrow \cdot \leftarrow$  on the remote commander to put the system into normal mode.
- Set the  $\odot$  color to its normal state.
- 3-5. Steps are the same as above.
6. Since 20 IRE is nearly blue, adjust the  $\diamond$  brightness control so that the blue barely glows.
7. Same as step 7 above.
8. Press  $\rightarrow \cdot \leftarrow$  on the remote commander to put the system into normal mode.

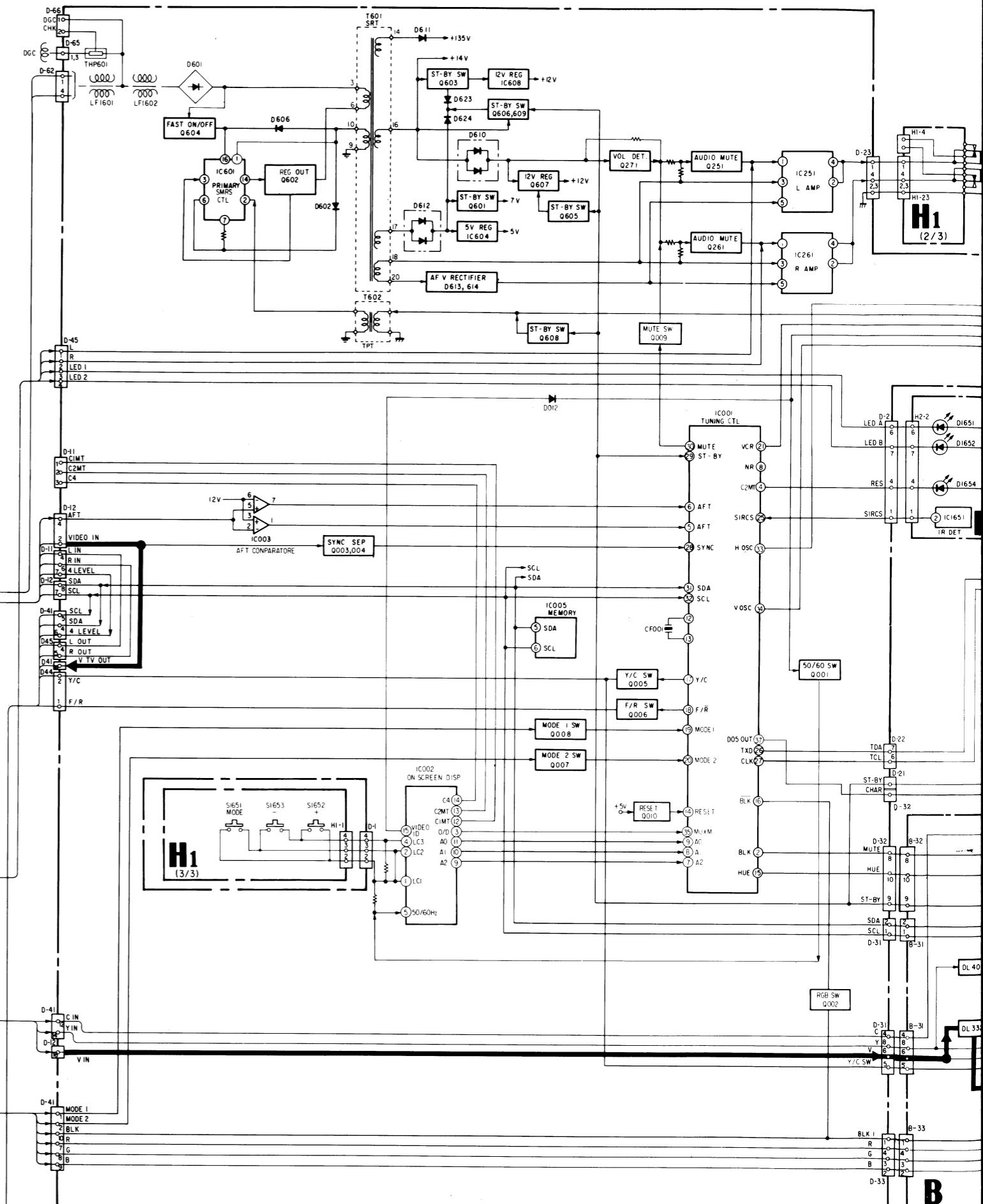
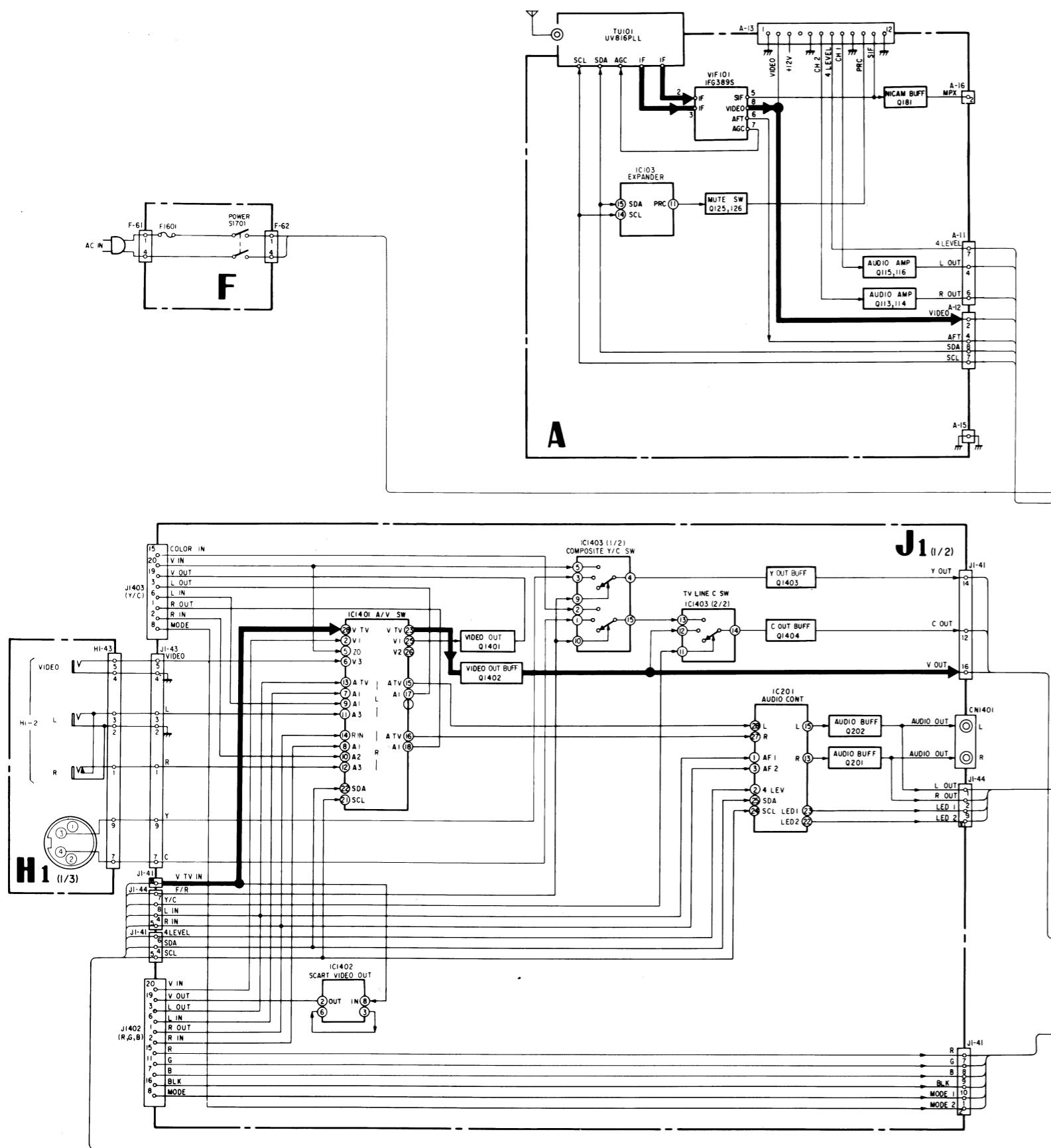
**SUB COLOR ADJUSTMENT**

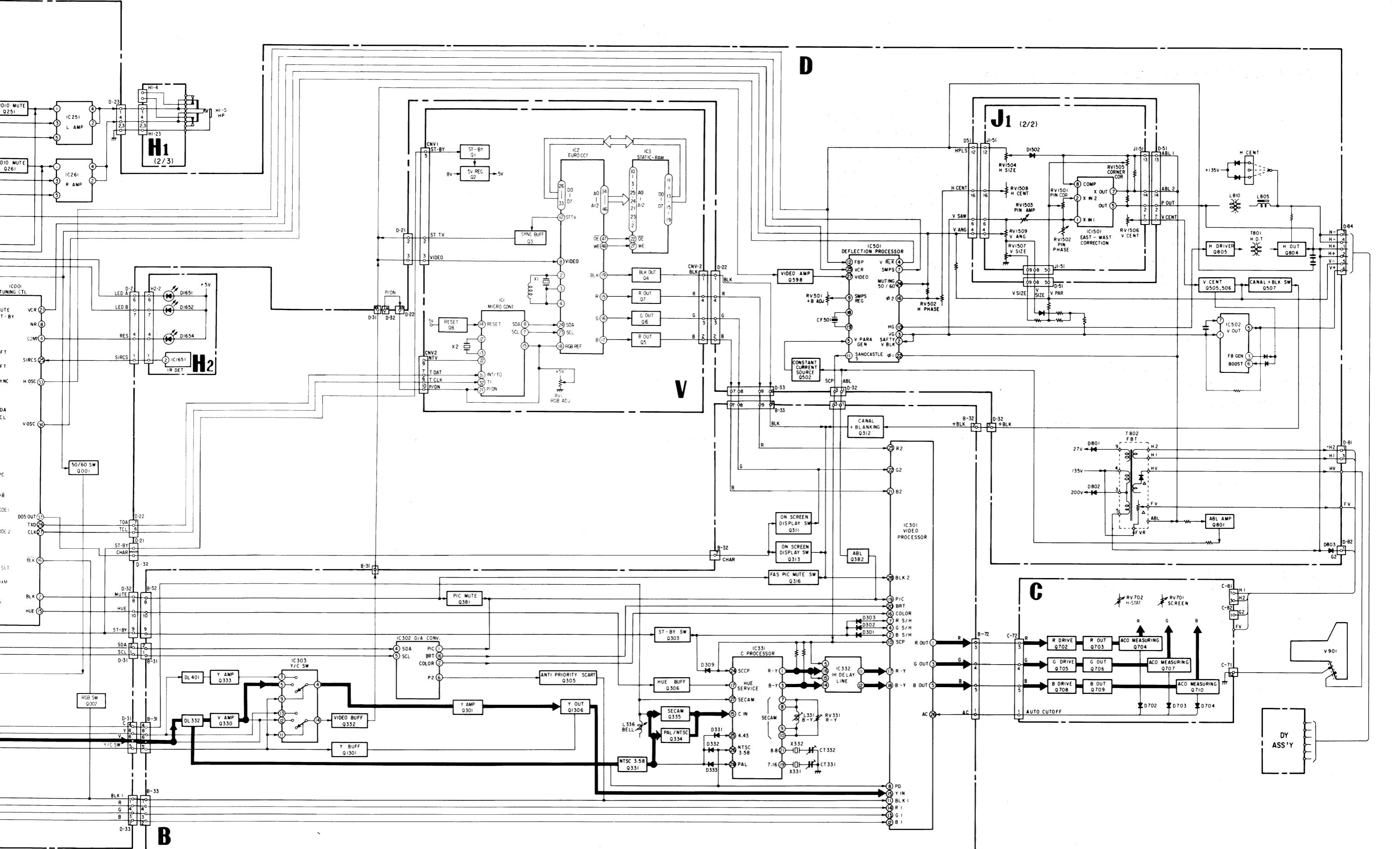
1. Set the system to receive color bars.
2. Press  $\rightarrow \leftarrow$  on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and - simultaneously, turn on the power. (SUB mode is obtained).
5. Adjust the colour control so that the B out waveform (pin ⑤ of C board connector CNC72) is as shown in the figure below.
6. Depress the  $\diamond$  (store) button of the remote commander. (SUB mode is released)



## SECTION 5 DIAGRAMS

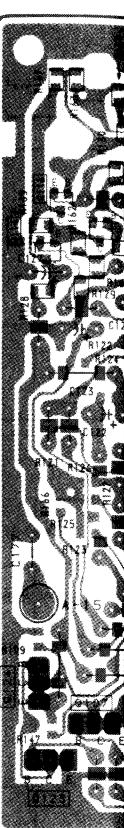
### 5-1. BLOCK DIAGRAM



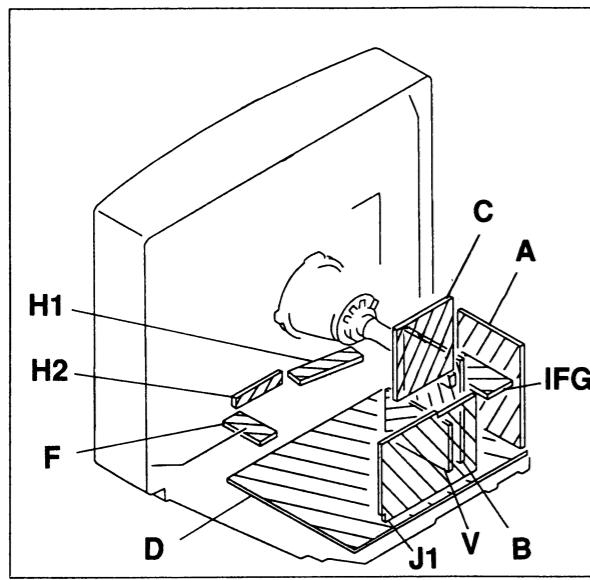


A [TUN]

— A Board —



## 5-2. CIRCUIT BOARDS LOCATION



## 5-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

### — Conductor Side —

#### Note:

The components identified by shading and mark  $\Delta$  are critical for safety. Replace only with part number specified.

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  
 $\mu\text{F}$ :  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.  
 $\text{k}\Omega$  = 1000 $\Omega$ ,  $\text{M}\Omega$  = 1000K $\Omega$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm

Rating electrical power 1/4W

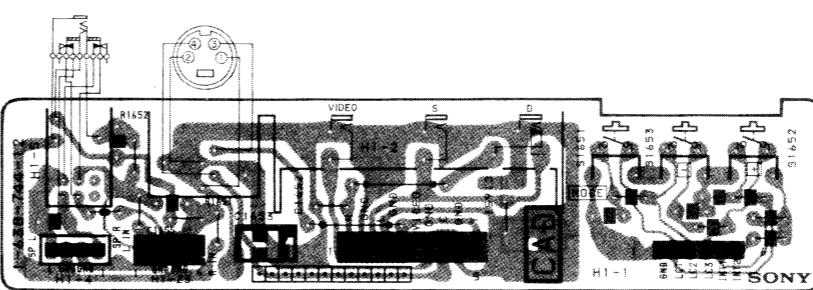
- METAL FILM (:RN) resistors in 1%, 1/6W unless otherwise specified.
- $\square$ : nonflammable resistor.
- $\triangle$ : internal component.
- $\boxed{\phantom{\cdot}}$ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- $\perp$ : earth-ground.
- $\not\perp$ : earth-chassis.
- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 M $\Omega$  digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- $\underline{\phantom{\cdot}}$ : B+ bus.
- $\overline{\phantom{\cdot}}$ : signal path. (RF)
- Circled numbers are waveform references.

H1 [CONTROLSW, AV INPUT,  
HEADPHONE]

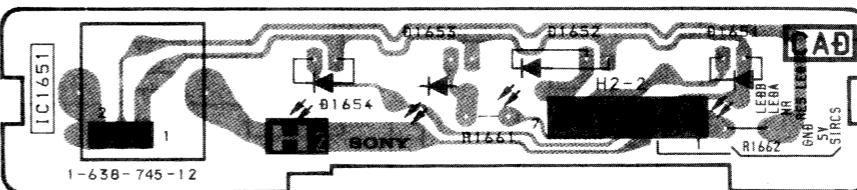
H2 [SIRCS, RECEIVER, INDICATOR]

F [AC IN, POWER SW]

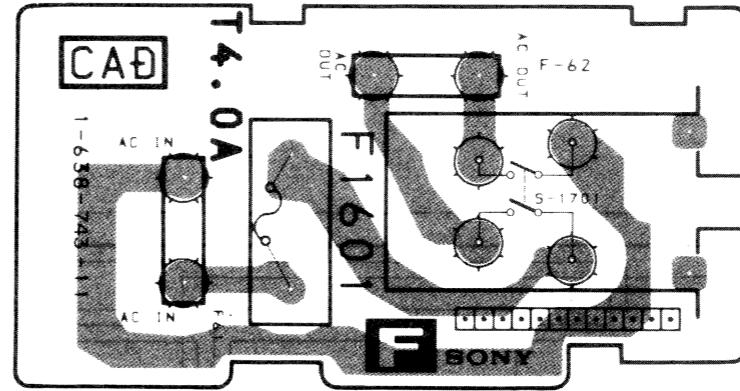
— H1 Board —



— H2 Board —



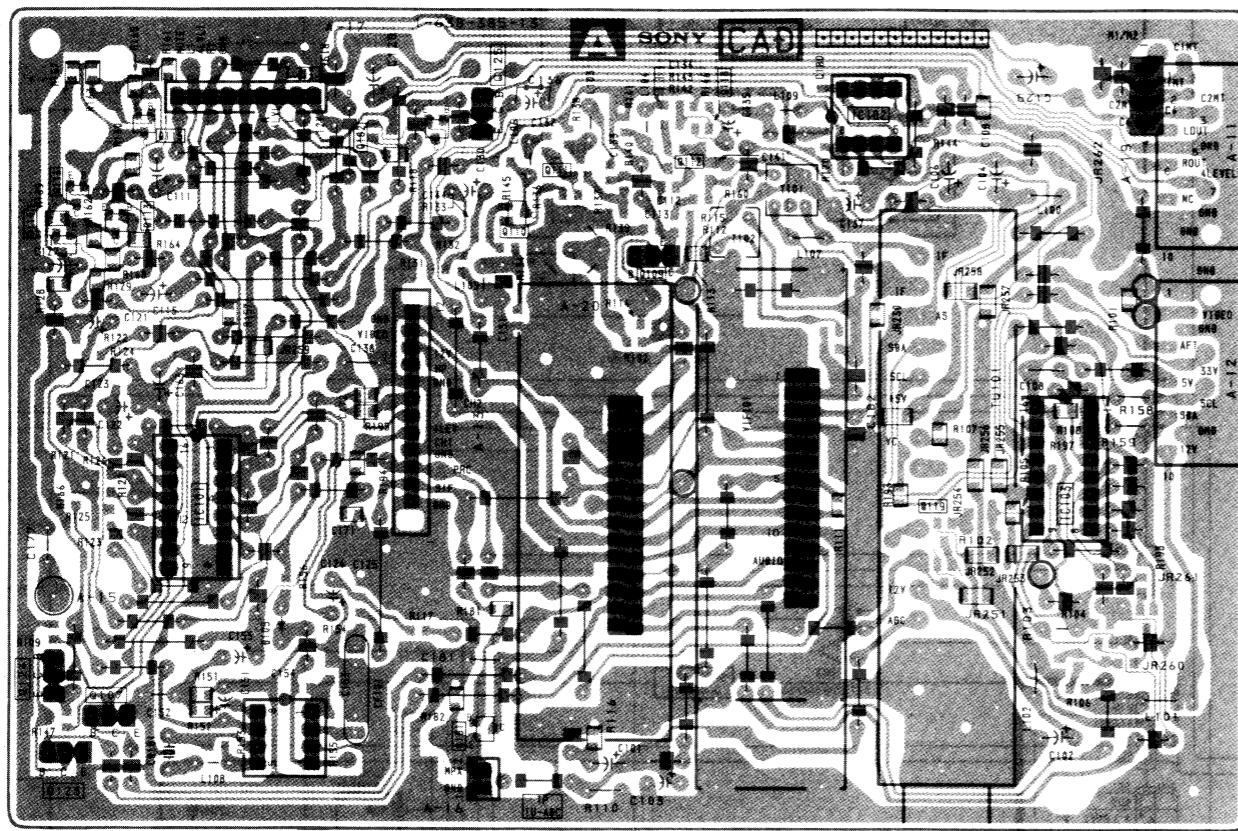
— F Board —



VER SWI

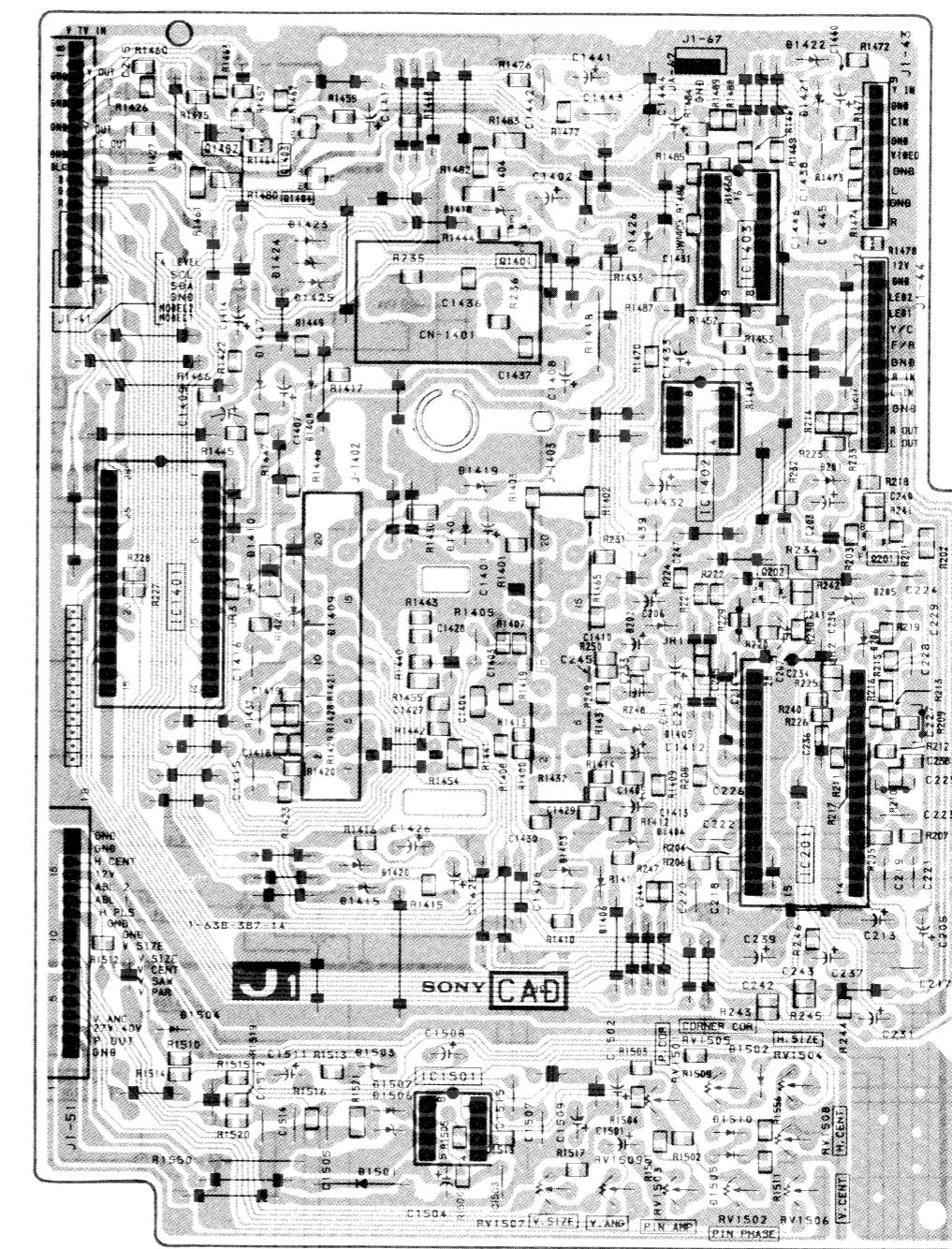
**A** [TUNER, SIF, VIF]

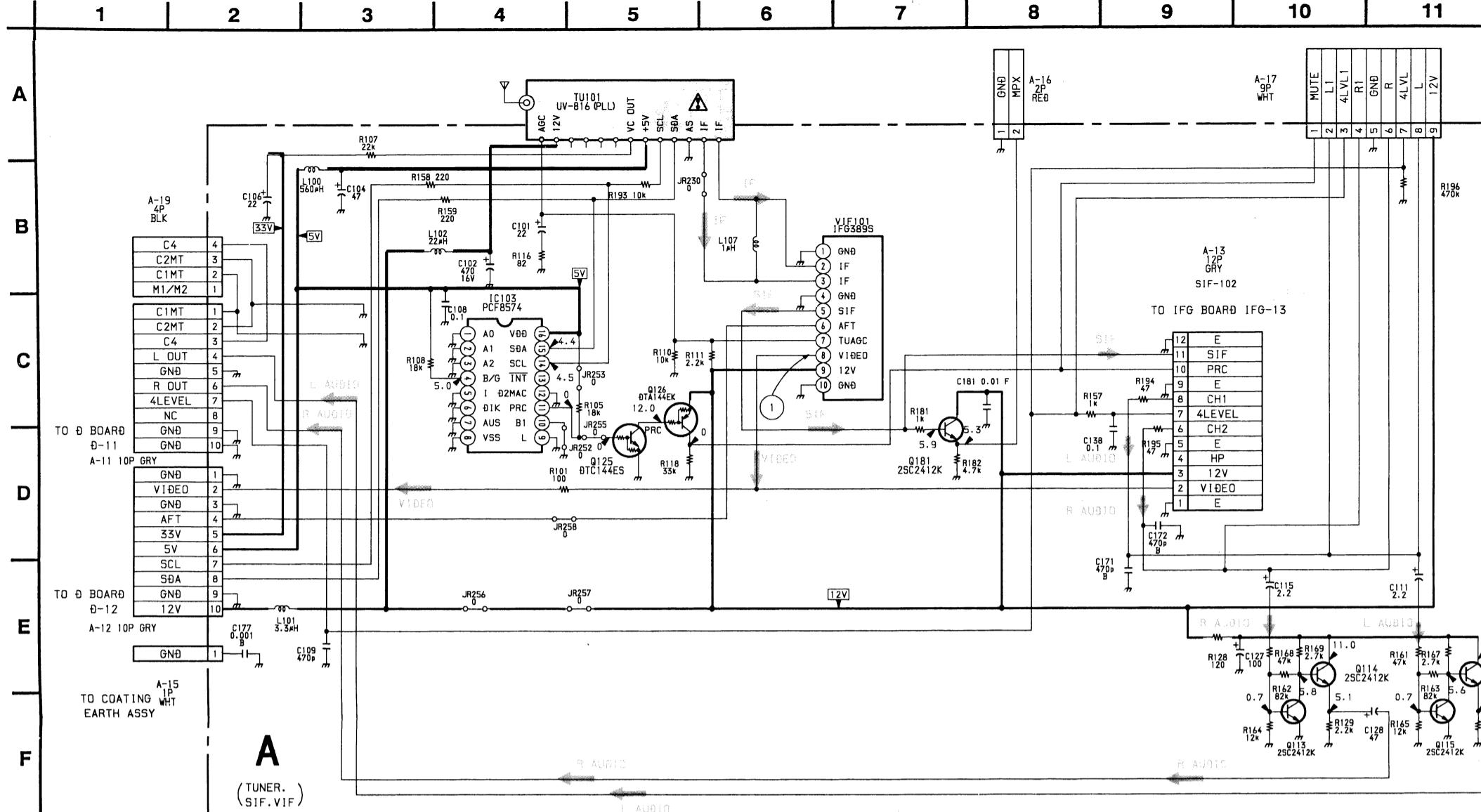
— A Board —



**J1** [AUDIO CONTROL, AV INPUT, Y/C INPUT,  
VIDEO OUT, EAST-WEST CORRECTION]

— J1 Board —



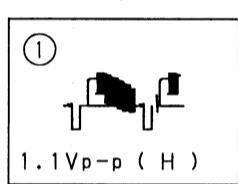


B-554073

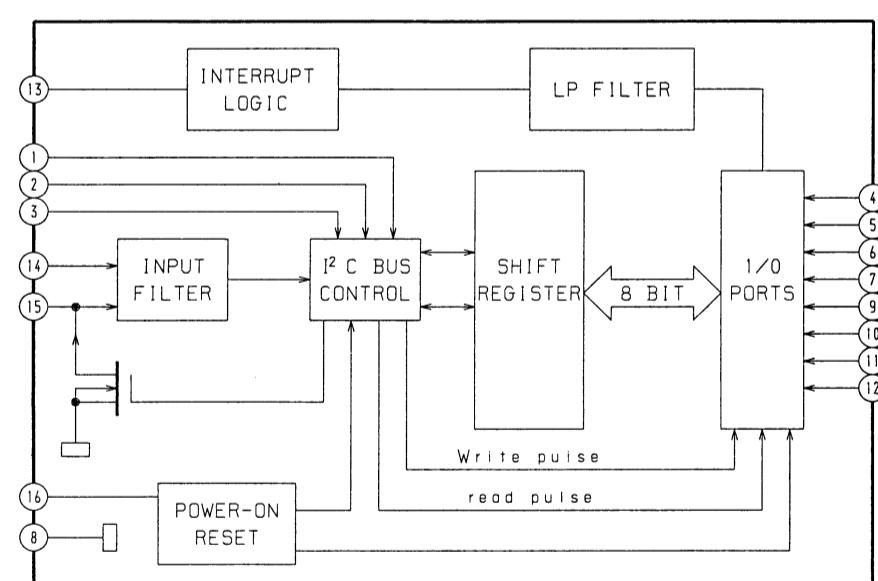
— A Board —

IC103	PCF8574	EXPANDER
Q113	2SC2412K	AU010 AMP
Q114	2SC2412K	AU010 AMP
Q115	2SC2412K	AU010 AMP
Q116	2SC2412K	AU010 AMP
Q125	DTIC144ES	MUTE SW
Q126	DTA144EK	MUTE SW
Q181	2SC2412K	NICAM BUFFER

— A Board —



A BOARD IC103 PCF8574



**H1**

**CONTROL SW**, **AV INPUT**, **HEADPHONE**

**S1652**, **S1653**, **S1651** (SWITCHES)

**MODE**

**C1652 100 $\mu$** , **C1651 100 $\mu$**

**R**, **L**, **VIDEO**

**S-VIDEO**

**H1-02**

**H1-43**, **J1-43**

**C1655 0.001**, **R162 470**, **R161 100K**

**AUDIO L**, **AUDIO R**

**H1-05**, **HP**

**C1653 0.001**, **R162 470**, **R161 100K**

**AUDIO R**, **AUDIO L**

**H1-1**, **SP REB**, **TO D BOARD D-1**

6	Y/C INIT
5	AV3 INIT
4	LC3
3	LC2
2	LC1
1	GND

1	R OUT
2	GND
3	L OUT
4	GND
5	VIDEO OUT
6	GND
7	C OUT
8	GND
9	Y OUT

1	L IN
2	GND
3	GND
4	R IN
4	SP L
3	GND
2	GND
1	SP R

1	TO D BOARD D-1
1	TO J1 BOARD J1-43
1	TO D BOARD D-23
1	TO SPEAKERS

H2 BOARD IC1651 SBX1610-11

**H<sub>2</sub>** (SIRCS. RECEIVER, INDICATOR)

5V

R1662

R1654  
L<sub>B</sub>-201VR  
RES

B1651  
L<sub>B</sub>-201VR

B1652  
L<sub>B</sub>-201VR

B1654  
L<sub>B</sub>-201VR  
RES

SBX1610-11

I<sub>1</sub> I<sub>2</sub>

4.7

LEDB 7  
LEDA 6  
NR 5  
RES, LED 4  
GND 3  
SIRCS 1

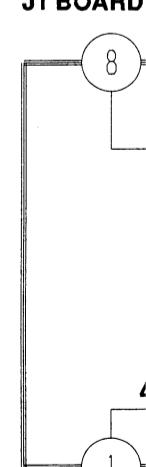
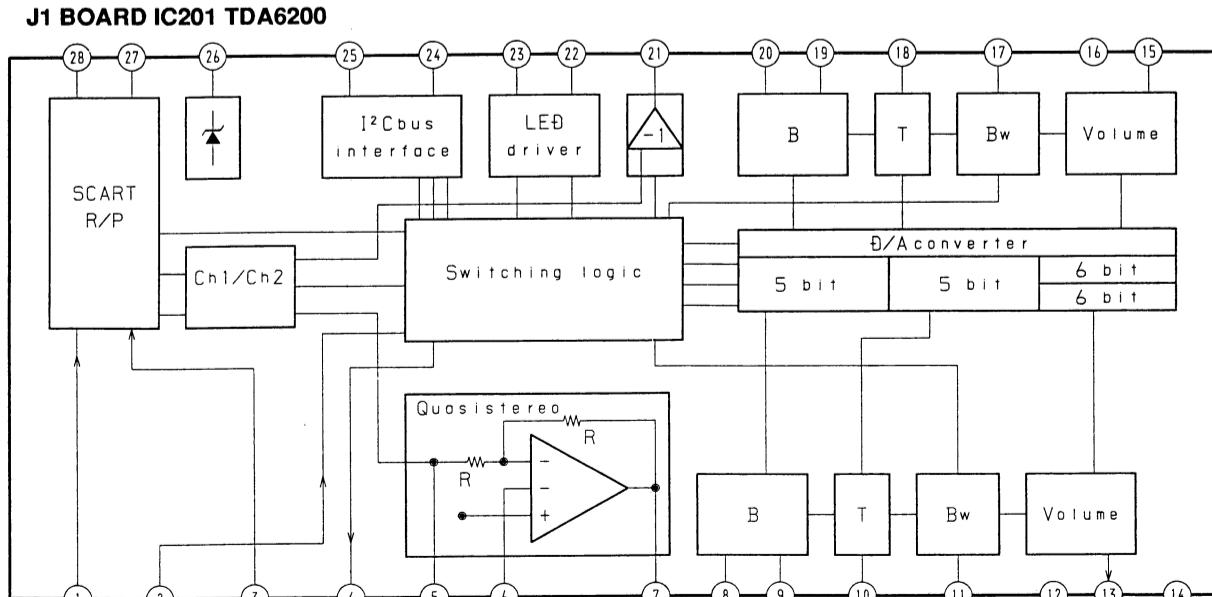
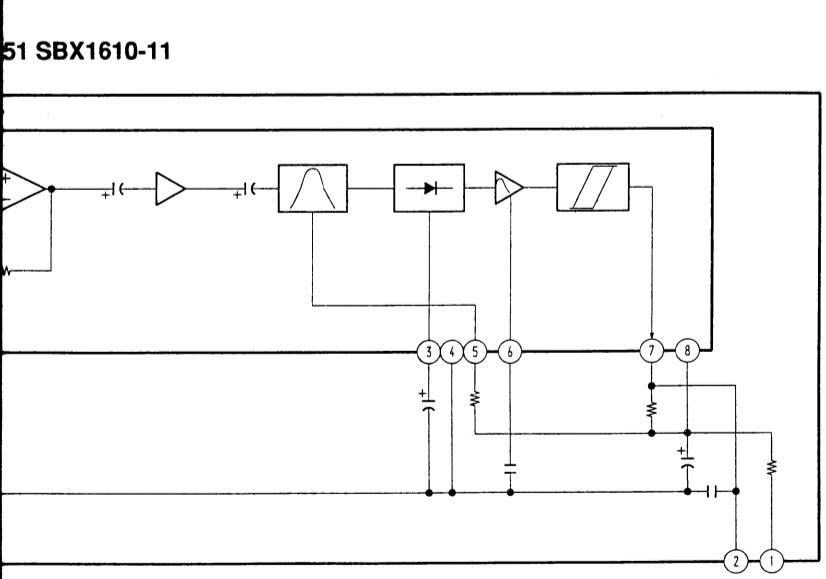
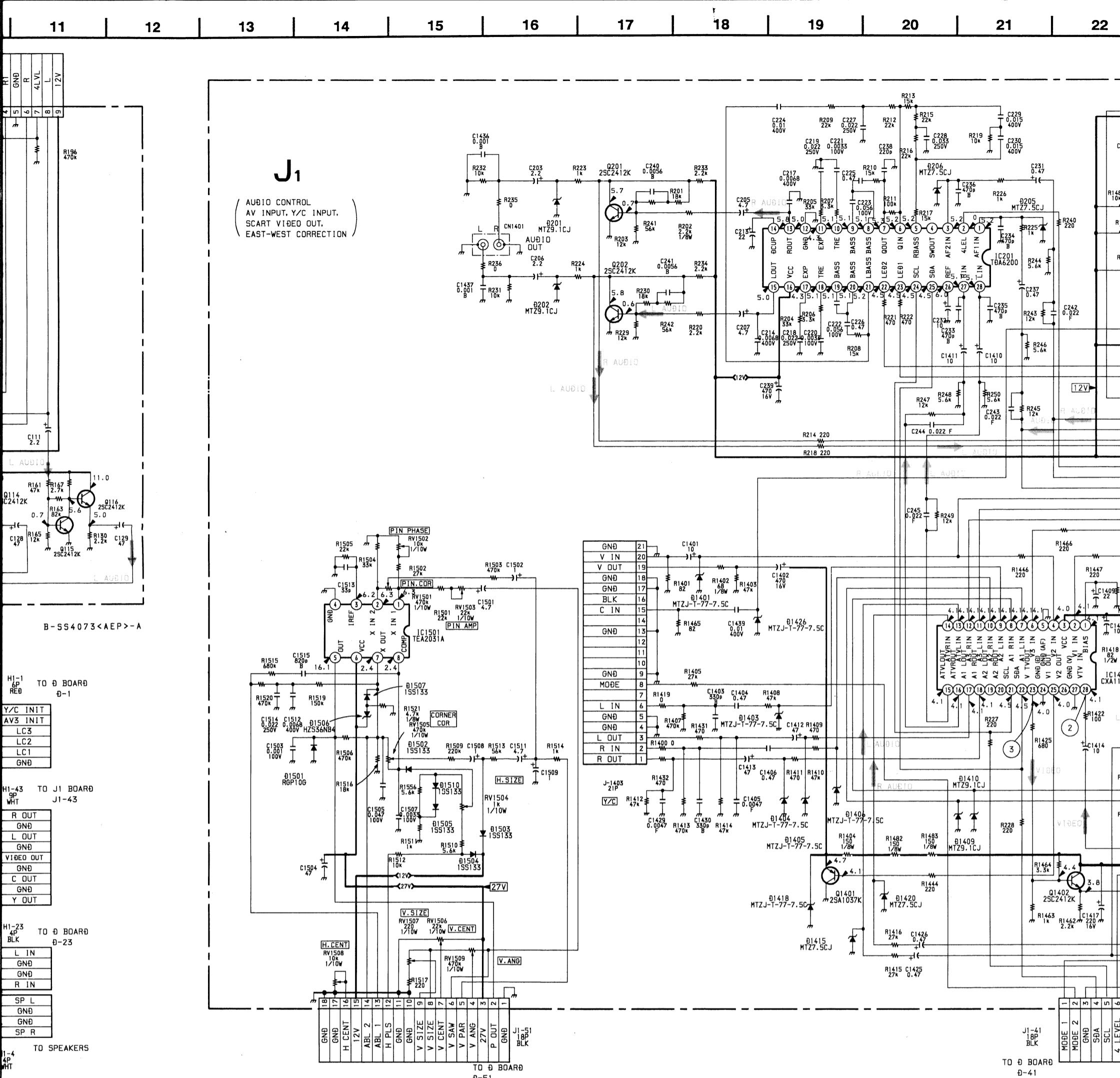
H<sub>2</sub>-2  
7P  
WHT

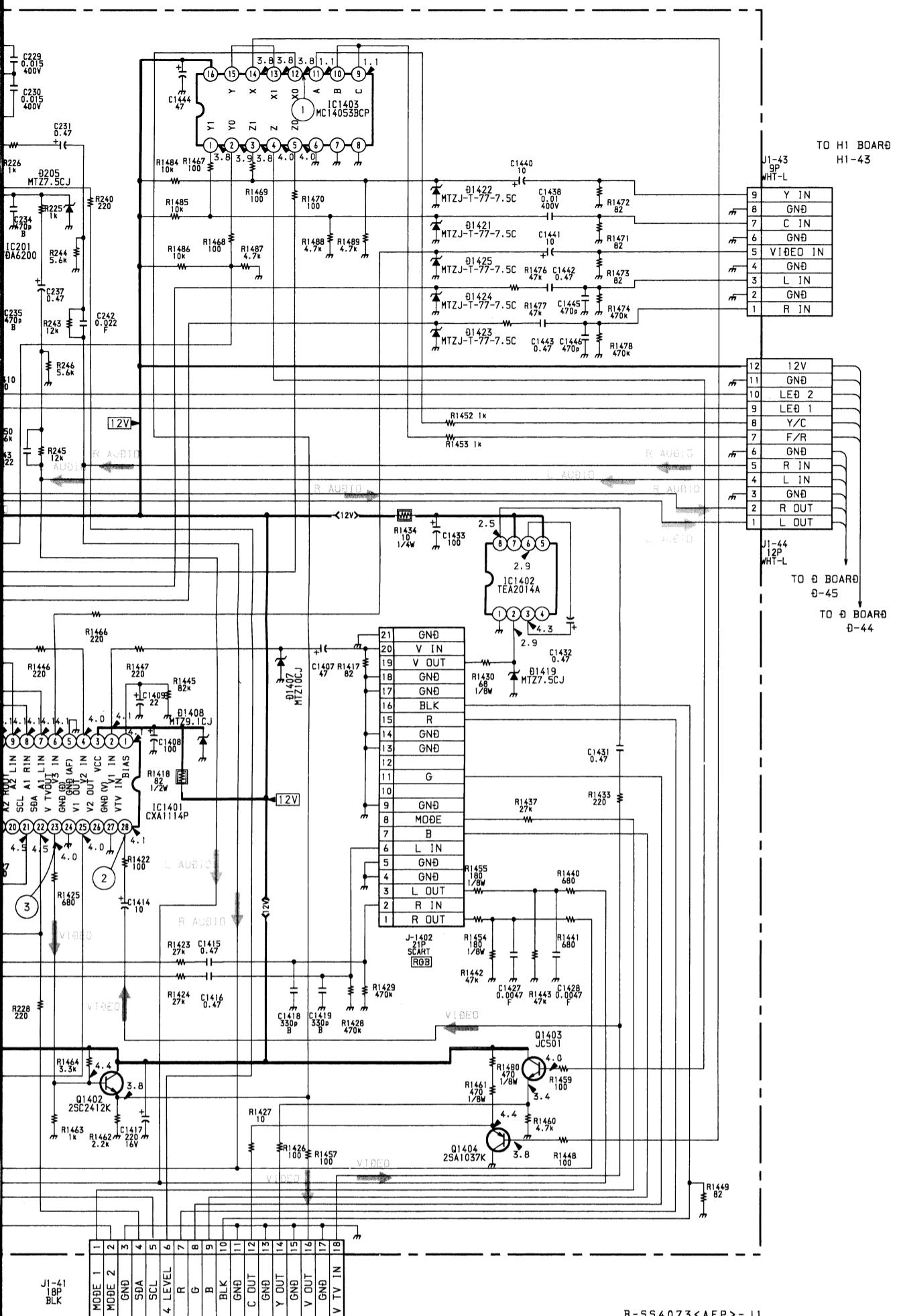
TO **B** BOARD

B-S S 4 0 7 3 < A E P > - H 2

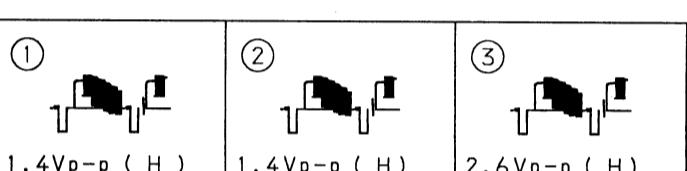
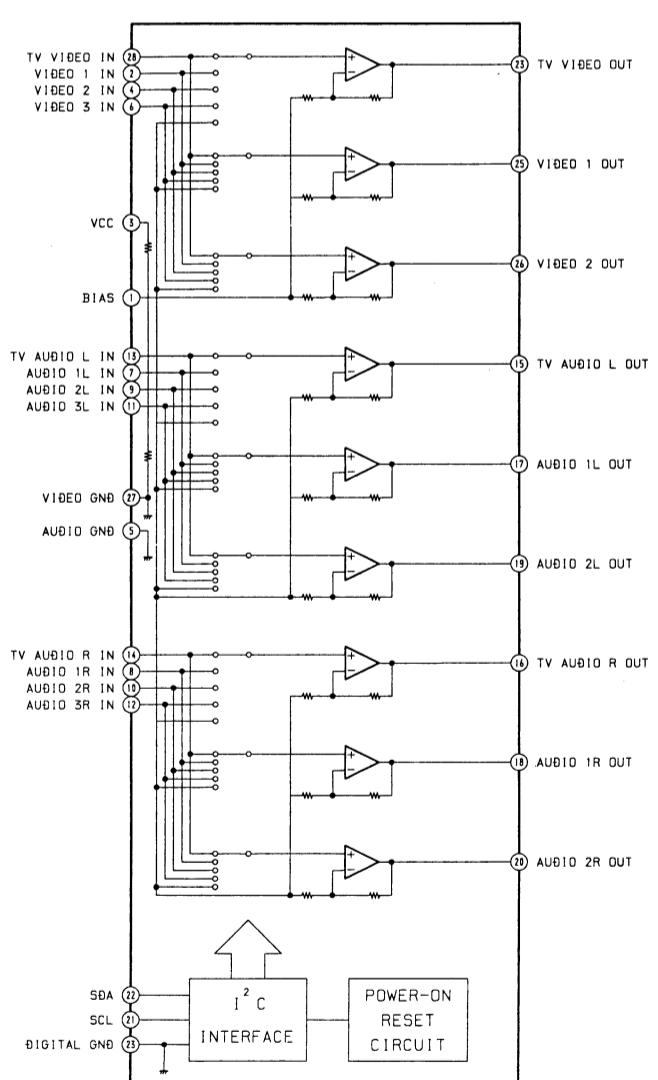
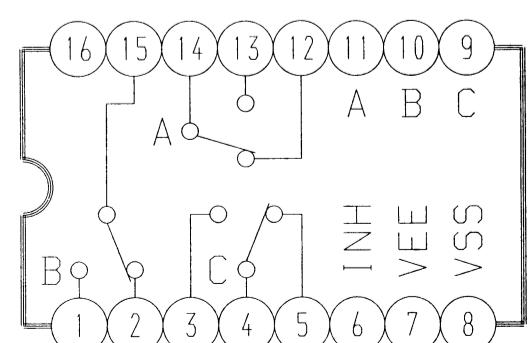
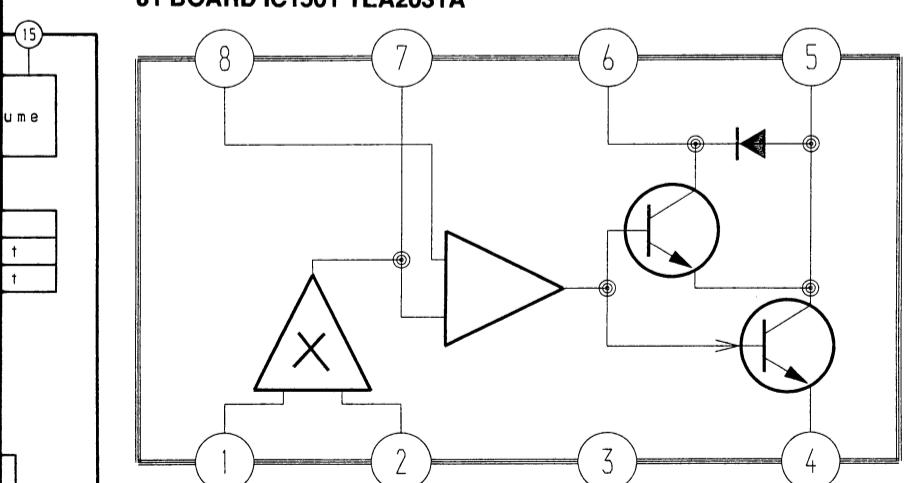
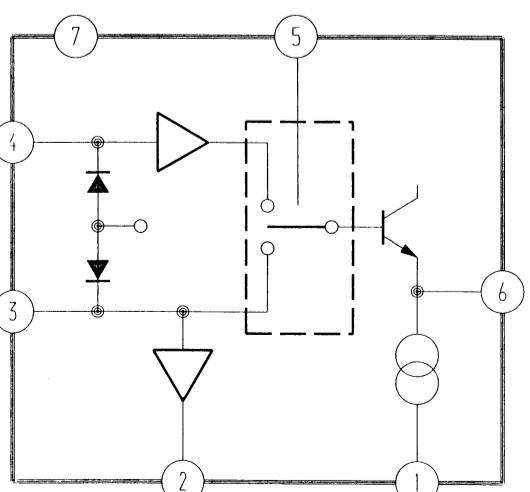
— H2 Board —

IC1651	SBX1610-11	INFRARED RECEIVER
01651	LD-201VR	AUDIO CHANNEL A INDICATOR
01652	LD-201VR	AUDIO CHANNEL B INDICATOR
01654	LD-201VR	RESET INDICATOR

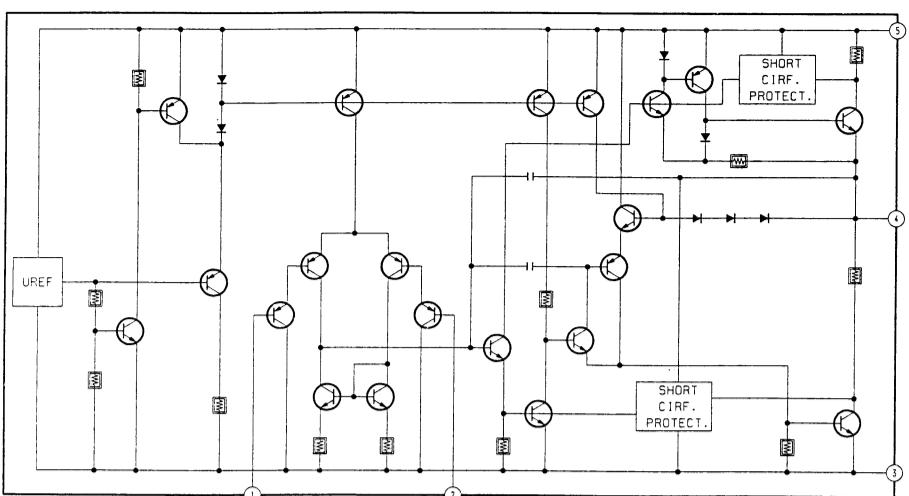


**J1 Board**

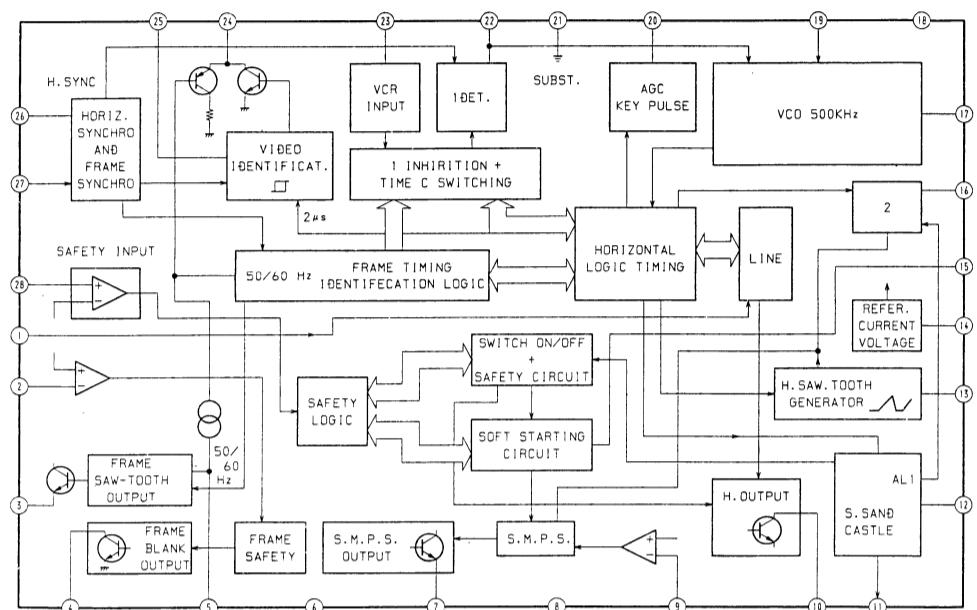
IC201	TDA6200	AUDIO CONTROL
IC1401	CXA1114P	AV SW
IC1402	TEA2014A	SCART VIDEO OUT
IC1403	MC14053BCP	COMPOSITE Y/C SW
IC1501	TEA2031A	EAST-WEST CORRECTION
Q201	2SC2412K	AUDIO R BUFF
Q202	2SC2412K	AUDIO L BUFF
Q1401	2SA1037K	VIDEO OUT
Q1402	2SC2412K	VIDEO OUT BUFF
Q1403	2SC2412K	Y OUT BUFF
Q1404	2SA1037K	C OUT BUFF
D201	MTZJ-T-77-7.5C	PROTECT
D202	MTZJ-T-77-7.5C	PROTECT
D205	MTZJ-T-77-7.5C	PROTECT
D206	MTZJ-T-77-7.5C	PROTECT
D1401	MTZJ-T-77-7.5C	PROTECT
D1403	MTZJ-T-77-7.5C	PROTECT
D1404	MTZJ-T-77-7.5C	PROTECT
D1405	MTZJ-T-77-7.5C	PROTECT
D1406	MTZJ-T-77-7.5C	PROTECT
D1407	MTZN-T-77-10C	PROTECT
D1408	MTZJ-T-77-9.1C	REG
D1409	MTZJ-T-77-9.1C	PROTECT
D1410	MTZJ-T-77-9.1C	PROTECT
D1415	MTZJ-T-77-7.5C	PROTECT
D1418	MTZJ-T-77-7.5C	PROTECT
D1419	MTZJ-T-77-7.5C	PROTECT
D1420	MTZJ-T-77-7.5C	PROTECT
D1421	MTZJ-T-77-7.5C	PROTECT
D1422	MTZJ-T-77-7.5C	PROTECT
D1423	MTZJ-T-77-7.5C	PROTECT
D1424	MTZJ-T-77-7.5C	PROTECT
D1425	MTZJ-T-77-7.5C	PROTECT
D1426	MTZJ-T-77-7.5C	PROTECT
D1501	RGP10GPKG23	PROTECT
D1502	ISS133	DECOUPLING H SIZE
D1503	ISS133	CLIPPING V PARABOLA
D1504	ISS133	CLIPPING H PULSE
D1505	ISS133	REG
D1506	HZS36NB4T0	PROTECT
D1507	ISS133	PROTECT
D1510	ISS133	REG

**J1 Board****J1 BOARD IC1401 CXA1114P****J1 BOARD IC1403 MC14053BCP****J1 BOARD IC1501 TEA2031A****J1 BOARD IC1402 TEA2014A**

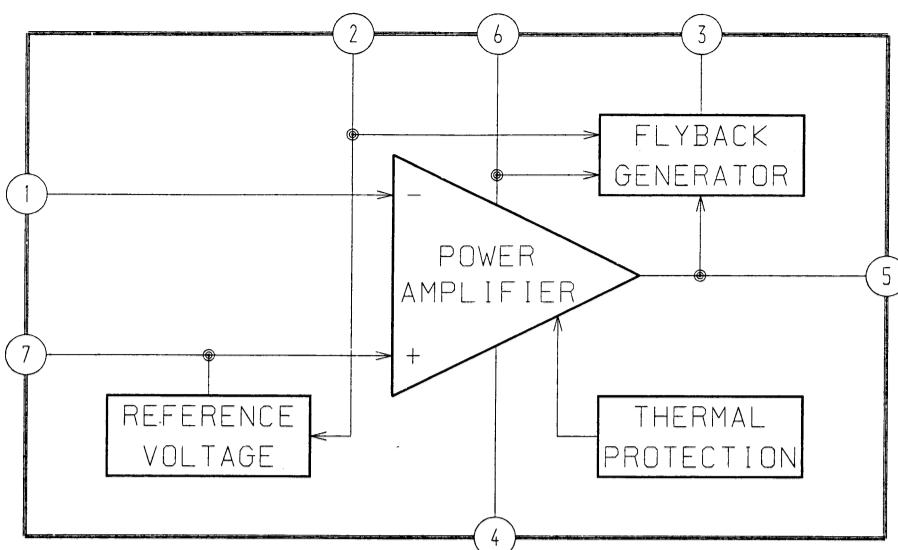
### D BOARD IC251/261 TDA2050



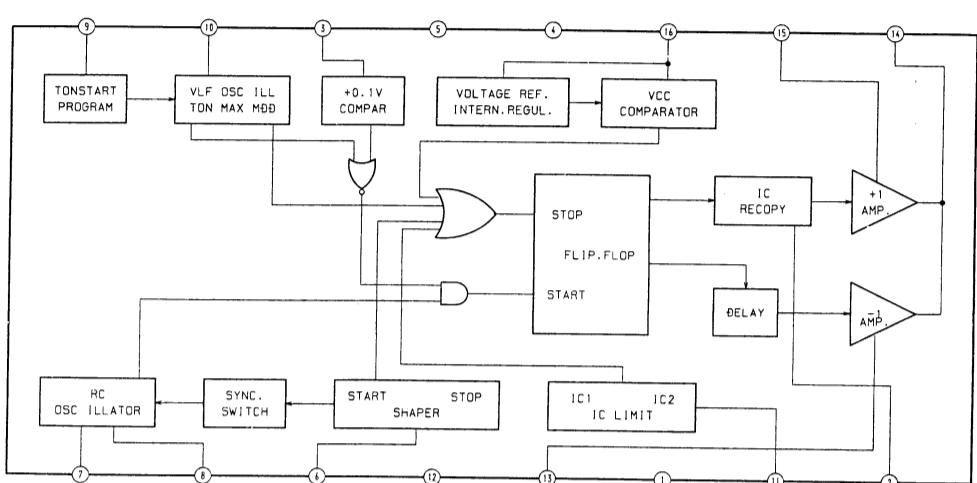
### D BOARD IC501 TEA2028B



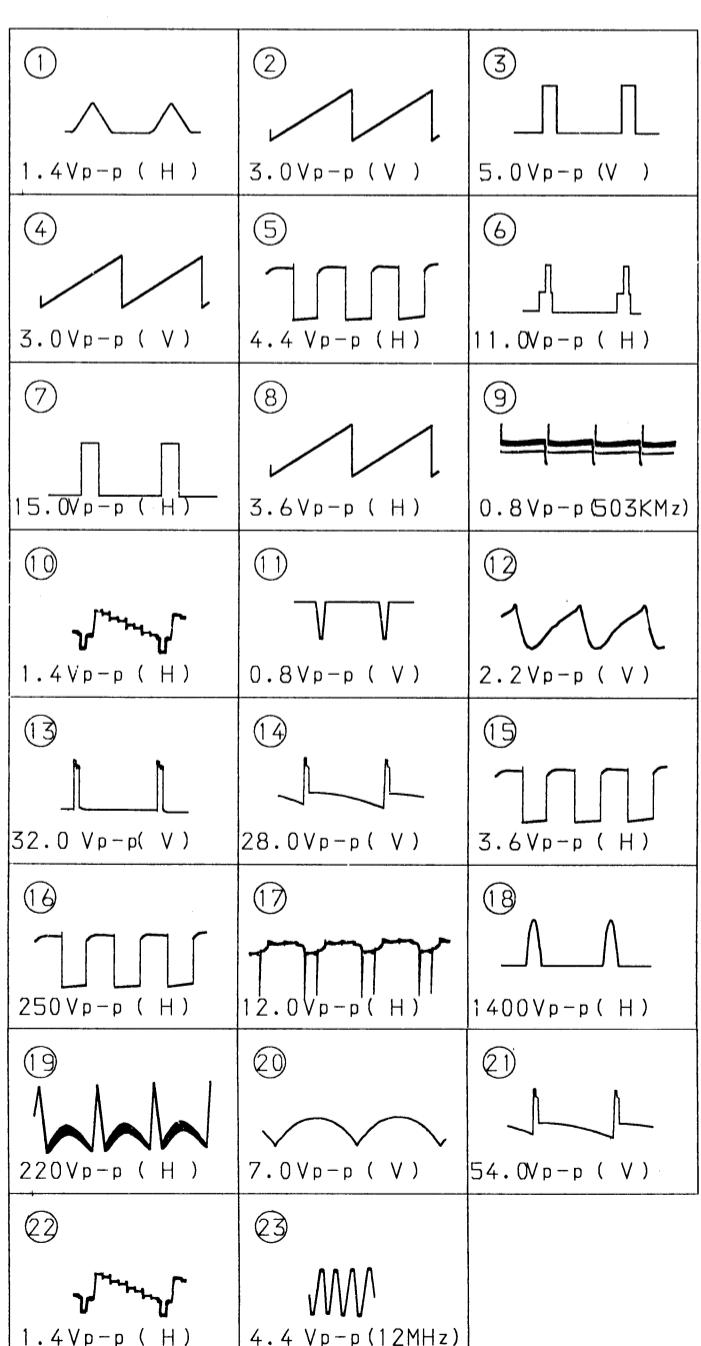
### D BOARD IC502 TDA8170



### D BOARD IC601 TEA2260



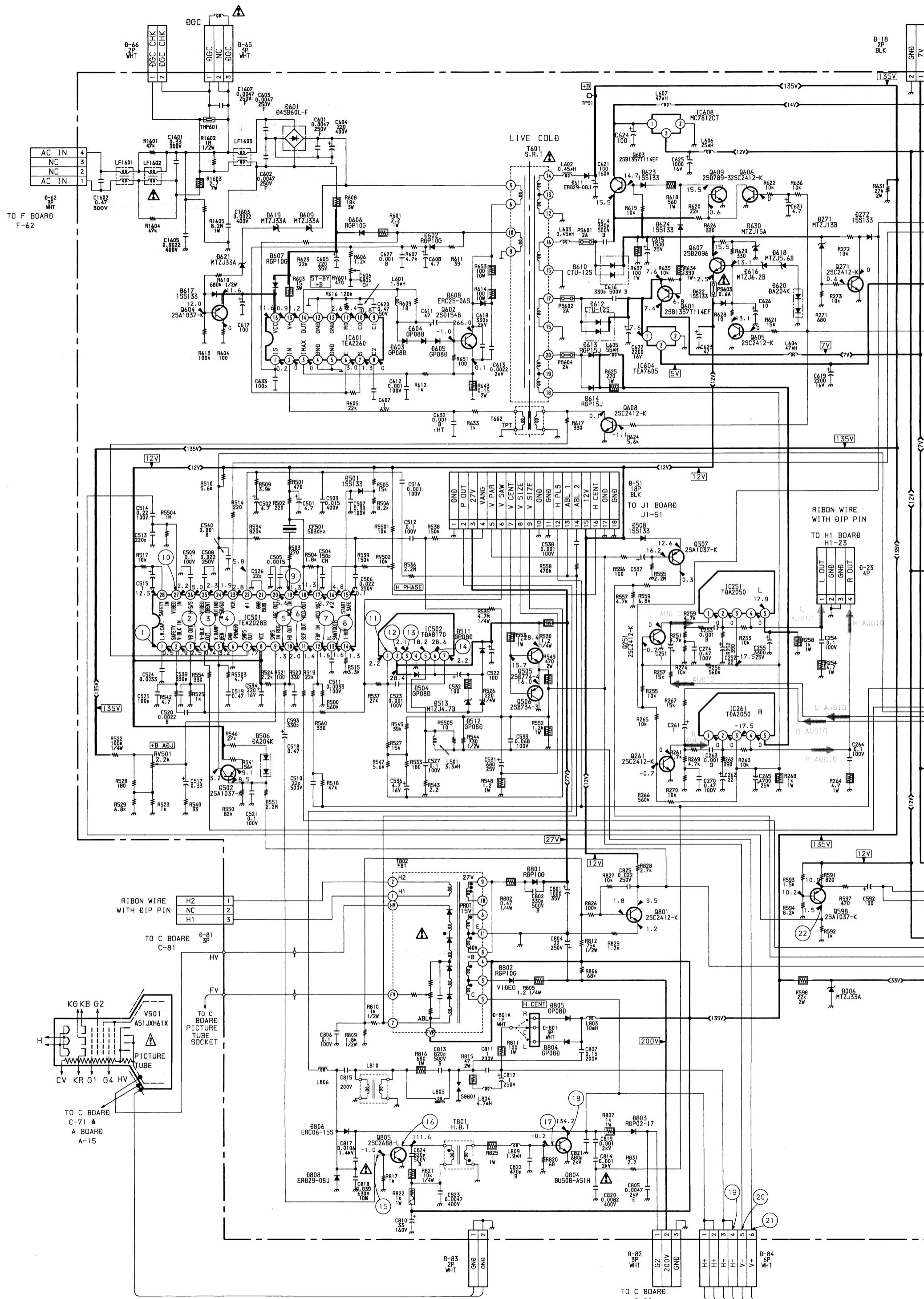
— D Board —

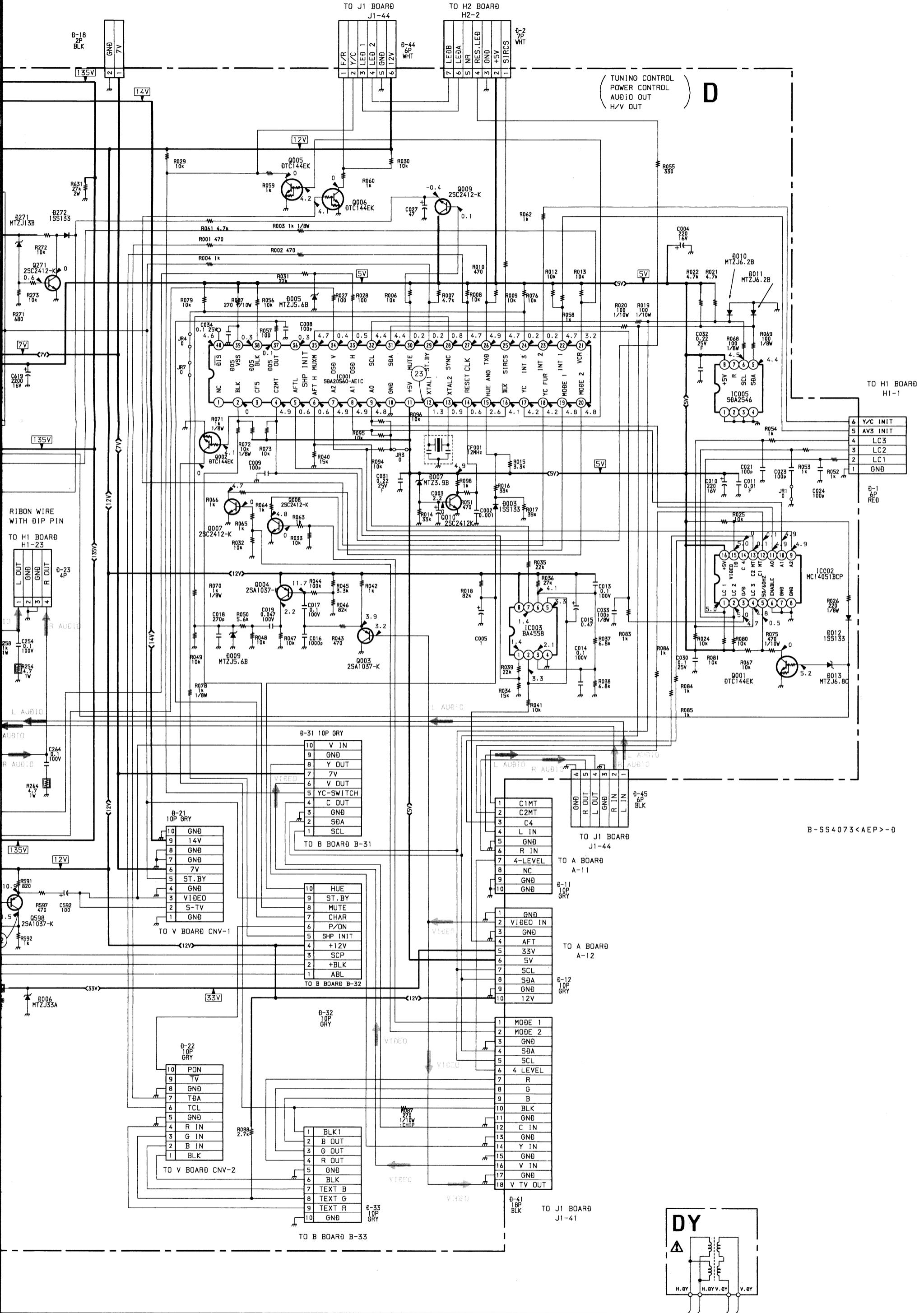


— D Board —

IC001	SDA20560-A012	TUNING CTL
IC002	MC14051BCP	ON SCREEN DISPLAY
IC003	BA4558	AFT COMPARATOR
IC005	SOA2546	MY MEMORY
IC251	TDA2050	AUDIO OUT (L)
IC261	TDA2050	AUDIO OUT (R)
IC501	TEA2028B	DEFLECTION PROCESSOR
IC502	TDA8170	V OUT
IC601	TEA2260	PRIMARY SMRS CTL
IC604	TEA7605	+5V REG
IC608	MC7812CT	+12V REG
Q001	BT144EK	50/60Hz SW
Q002	BT144EK	BLK SW
Q003	2SA1037K	SYNC SEPARATOR
Q004	2SA1037K	SYNC SEPARATOR
Q005	BT144EK	Y/C SW
Q006	BT144EK	FRONT/REAR SW
Q007	2SC2412K	MODE 2 SWITCH
Q008	2SC2412K	MODE 1 SWITCH
Q009	2SC2412K	MUTE SW
Q010	2SC2412K	RESET
Q251	2SC2412K	AUDIO MUTE
Q261	2SC2412K	AUDIO MUTE
Q271	2SC2412K	VOLTAGE DETECT
Q502	2SA1037K	CONSTANT CURRENT SOURCE
Q505	ZSB774	V CENT
Q506	ZSB734	V CENT
Q507	2SA1037K	CANAL +BLK
Q598	2SA1037K	VIDEO AMP
Q601	2SB1357T14EF	STBY SV
Q602	ZSB1548	REG OUT
Q603	ZSB1357T14EF	STBY SW
Q604	2SA1037K	FAST ON/OFF
Q605	2SC2412K	STBY SW
Q606	2SC2412K	STBY SW
Q607	ZSB2096-EF	+12V REG
Q608	2SC2412K	STBY SW
Q609	ZSB789-3	STBY SW
Q801	2SC2412K	ABL AMP
Q804	ZSB1941	H OUT
Q805	ZSC2688	H DRIVER

Q003	1SS133	HUE CTL
Q005	MTZJ5.6B	PROTECT
Q006	MTZJ33A	VC VOLTAGE REGULATION
Q007	MTZJ3.9B	PROTECT RESET
Q009	MTZJ5.6B	CLIPPING SYNC LEVEL
Q010	MTZJ6.2B	PROTECT
Q011	MTZJ6.2B	PROTECT
Q012	1SS133	PROTECT
Q013	MTZJ6.8C	PROTECT
Q271	MTZJ13B	VOLTAGE DETECT
Q272	1SS133	DECOUPLING MUTE AUDIO
Q501	1SS133	SOFT START
Q504	GP088PKG23	V PULSE OUT
Q506	DA204K	CURRENT REG
Q508	1SS133	CANAL +BLK LEVEL
Q511	GP088PKG23	PROTECT
Q512	GP088PKG23	PROTECT
Q513	MTZJ4.7B	PROTECT
Q601	DA3B40L-F	AC RECT
Q602	RGP100PKG23	REF RECT
Q603	GP088PKG23	SMP5 DRIVE 1
Q604	GP088PKG23	SMP5 DRIVE 2
Q605	GP088PKG23	SMP5 DRIVE 3
Q606	RGP100PKG23	+12V RECT
Q607	RGP100PKG23	REF RECT
Q608	ERC25-06S	PLUSE CLIPPER
Q609	MTZJ33A	FAST ON/OFF-2
Q610	CTU-125	+14V RECT
Q611	ERB29-08J	+135V RECT
Q612	CTU-125	+7V RECT
Q613	RGP15J-6040G23	AF V RECT-1
Q614	RGP15J-6040G23	AF V RECT-2
Q616	MTZJ6.2B	+12V REG
Q617	1SS133	PROTECT
Q618	MTZJ5.6B	+12V REF
Q619	MTZJ33A	FAST ON/OFF-2
Q620	DA204K	+12V REF
Q621	MTZJ33A	FAST ON/OFF-3
Q622	1SS133	PROTECT
Q623	1SS133	DECOUPLING STBY
Q624	1SS133	DECOUPLING BTBY
Q630	MTZJ15A	+12V RECT
Q801	RGP100PKG23	+27V RECT
Q802	RGP100PKG23	+200V RECT
Q803	RGP02-17PKG23	G2 RECT
Q804	GP088PKG23	H CENTER-1
Q805	GP088PKG23	H CENTER-2
Q806	ERC06-155	H DAMPER-1
Q808	ERB28-085	PIN DAMPER

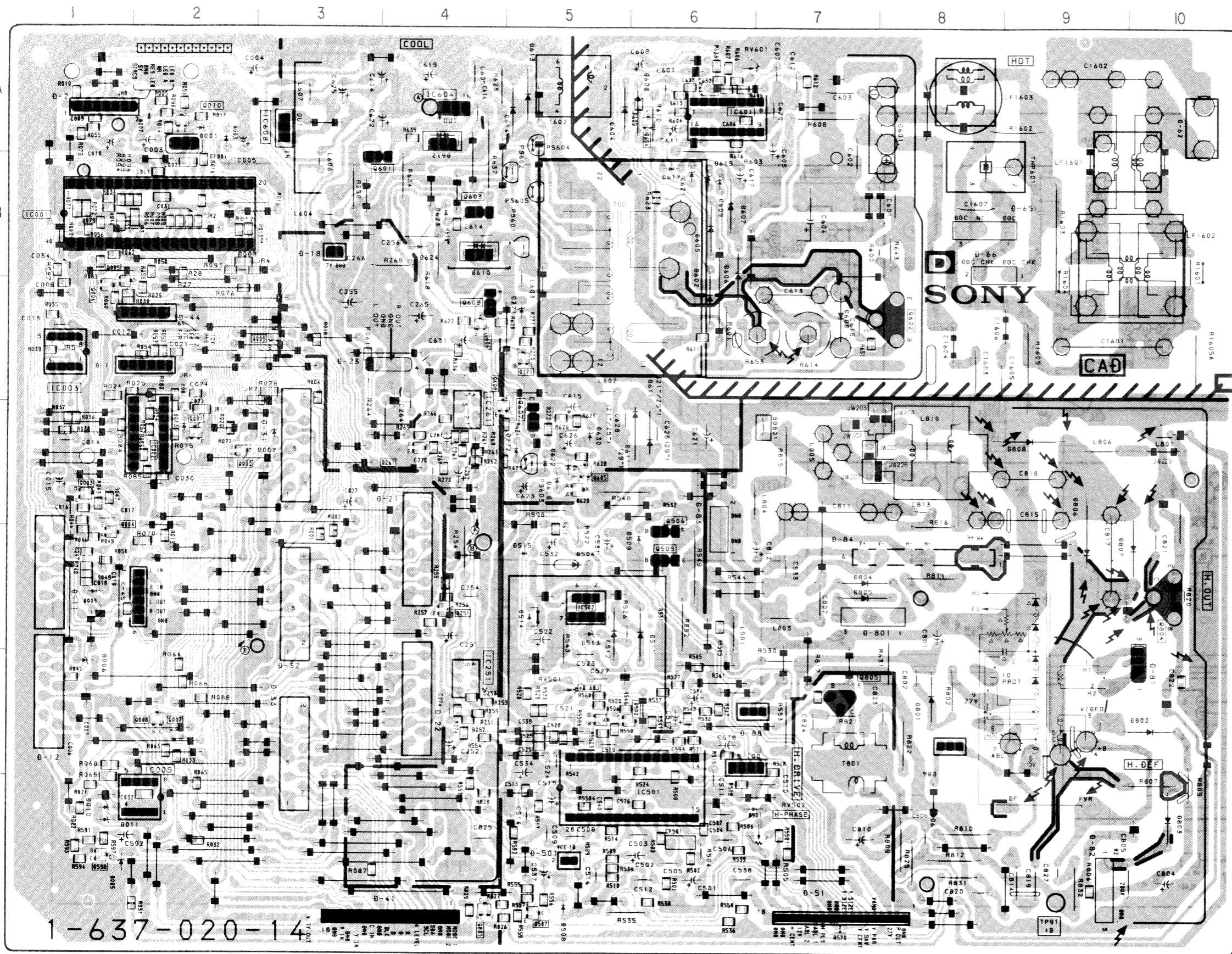




D

[TUNING CONTROL, POWER CONTROL,  
AUDIO OUT, H/V OUT]

— D Board —



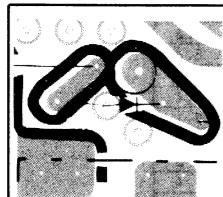
— D Board —

IC		D012	C-1
IC001	B-2	D013	D-2
IC002	D-2	D271	C-5
IC003	C-1	D272	D-5
IC005	G-2	D501	G-7
IC251	F-4	D504	E-5
IC261	D-4	D506	F-5
IC501	G-6	D508	G-5
IC502	E-5	D509	E-6
IC601	A-6	D511	E-6
IC604	A-4	D512	E-5
IC608	A-3	D513	E-5
TRANSISTOR		D514	E-5
		D515	E-5
		D601	A-8
		D602	C-6
		D603	A-6
		D604	A-5
Q001	D-2	D605	B-6
Q002	D-2	D606	B-6
Q003	D-1	D607	B-6
Q004	E-1	D608	C-7
Q005	C-1	D609	B-6
Q006	C-1	D610	B-4
Q007	F-2	D611	D-6
Q008	F-2	D612	A-4
Q009	C-3	D613	A-5
Q010	A-2	D614	A-5
Q251	E-4	D616	D-5
Q261	D-4	D617	B-6
Q271	C-5	D618	D-5
Q502	F-6	D619	B-6
Q505	E-6	D620	D-5
Q506	D-6	D621	B-6
Q507	G-5	D622	D-5
Q598	G-1	D623	B-4
Q601	B-3	D624	B-4
Q602	C-8	D630	D-5
Q603	B-4	D801	F-8
Q604	A-6	D802	F-10
Q605	D-5	D803	G-10
Q606	C-4	D804	E-7
Q607	D-5	D805	E-7
Q608	D-4	D806	E-9
Q609	C-4	D807	E-10
Q801	G-4	D808	D-9
Q804	E-10		
Q805	F-7		
DIODE		VARIABLE RESISTOR	
D001	A-2	RV501	F-5
D002	D-3	RV502	G-7
D003	A-2	RV601	A-6
D005	G-1		
D006	F-1		
D007	A-2		
D009	E-1		
D010	G-1		
D011	G-1		
TP		TP91	G-9

D012	C - 1
D013	D - 2
D271	C - 5
D272	D - 5
D501	G - 7
D504	E - 5
D506	F - 5
D508	G - 5
D509	E - 6
D511	E - 6
D512	E - 5
D513	E - 5
D514	E - 5
D515	E - 5
D601	A - 8
D602	C - 6
D603	A - 6
D604	A - 5
D605	B - 6
D606	B - 6
D607	B - 6
D608	C - 7
D609	B - 6
D610	B - 4
D611	D - 6
D612	A - 4
D613	A - 5
D614	A - 5
D616	D - 5
D617	B - 6
D618	D - 5
D619	B - 6
D620	D - 5
D621	B - 6
D622	D - 5
D623	B - 4
D624	B - 4
D630	D - 5
D801	F - 8
D802	F - 10
D803	G - 10
D804	E - 7
D805	E - 7
D806	E - 9
D807	E - 10
D808	D - 9

VARIABLE RESISTOR	
RV501	F - 5
RV502	G - 7
RV601	A - 6

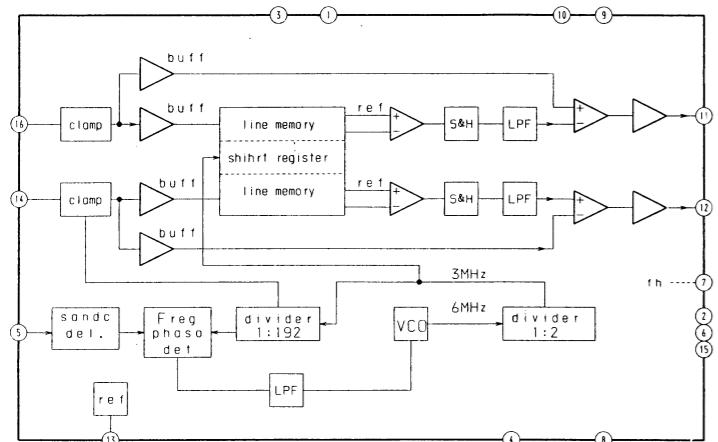
TP	
TP91	G - 9



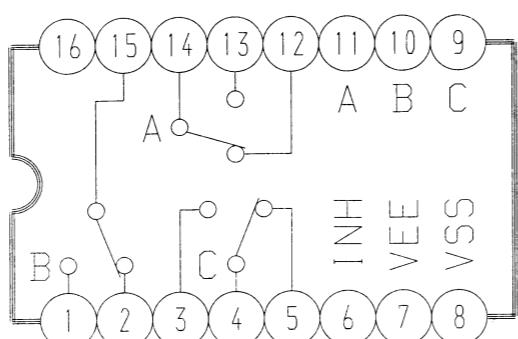
**NOTE:**

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

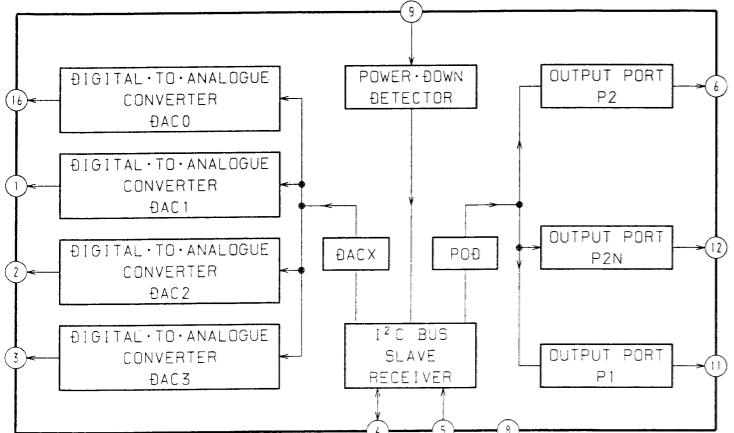
### B BOARD IC332 TDA4660V2



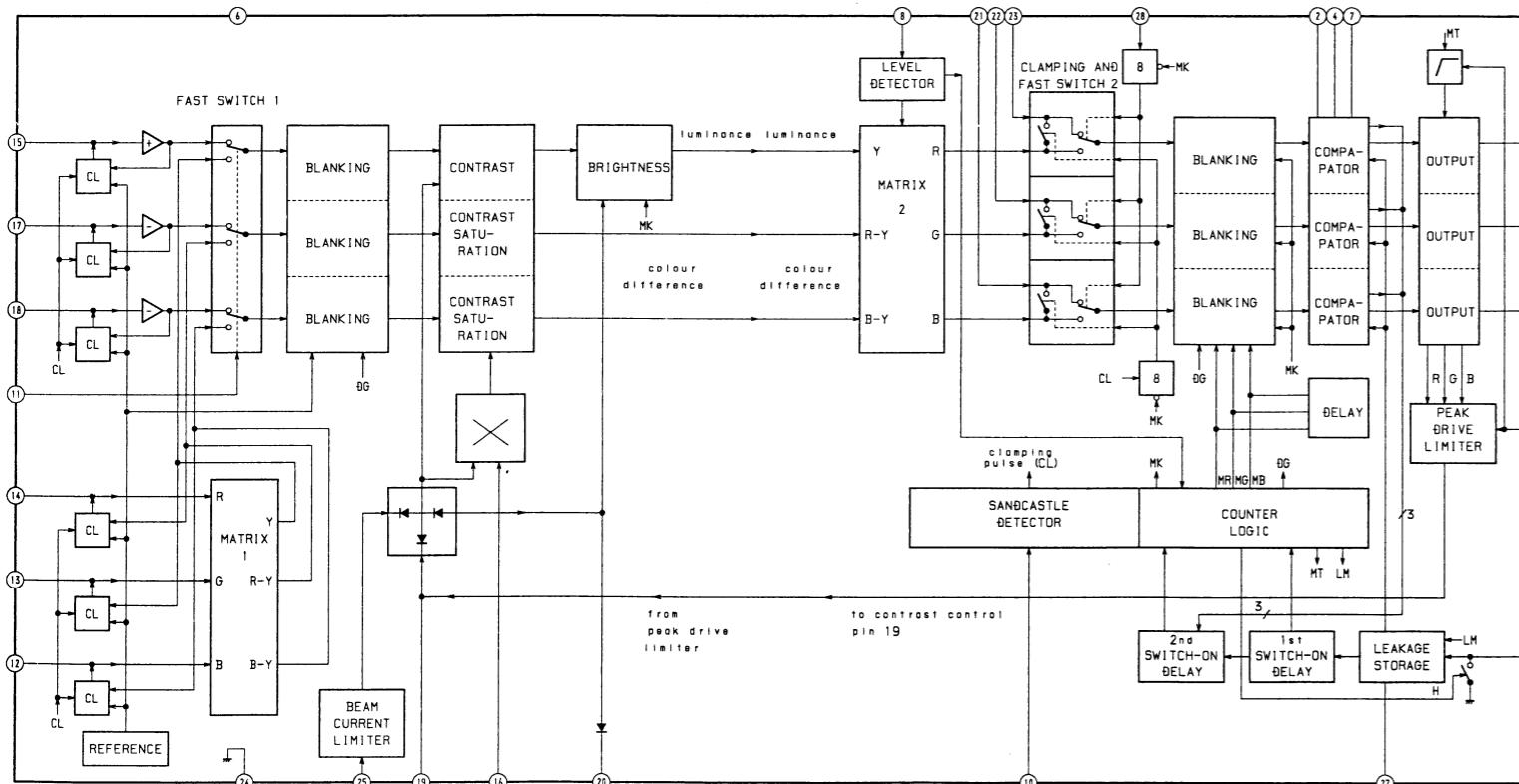
### B BOARD IC303 MC14053BCP



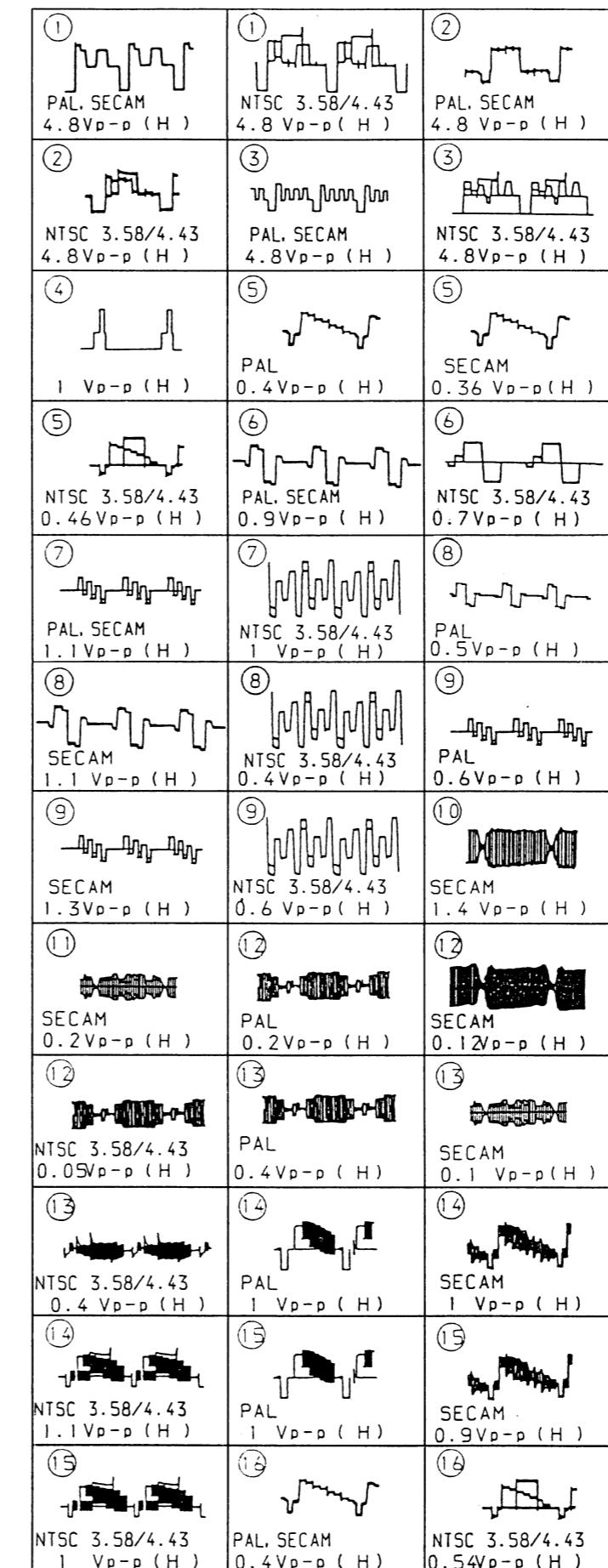
### B BOARD IC302 TDA8442-N3



### B BOARD IC301 TDA4580-V7



### — B Board —



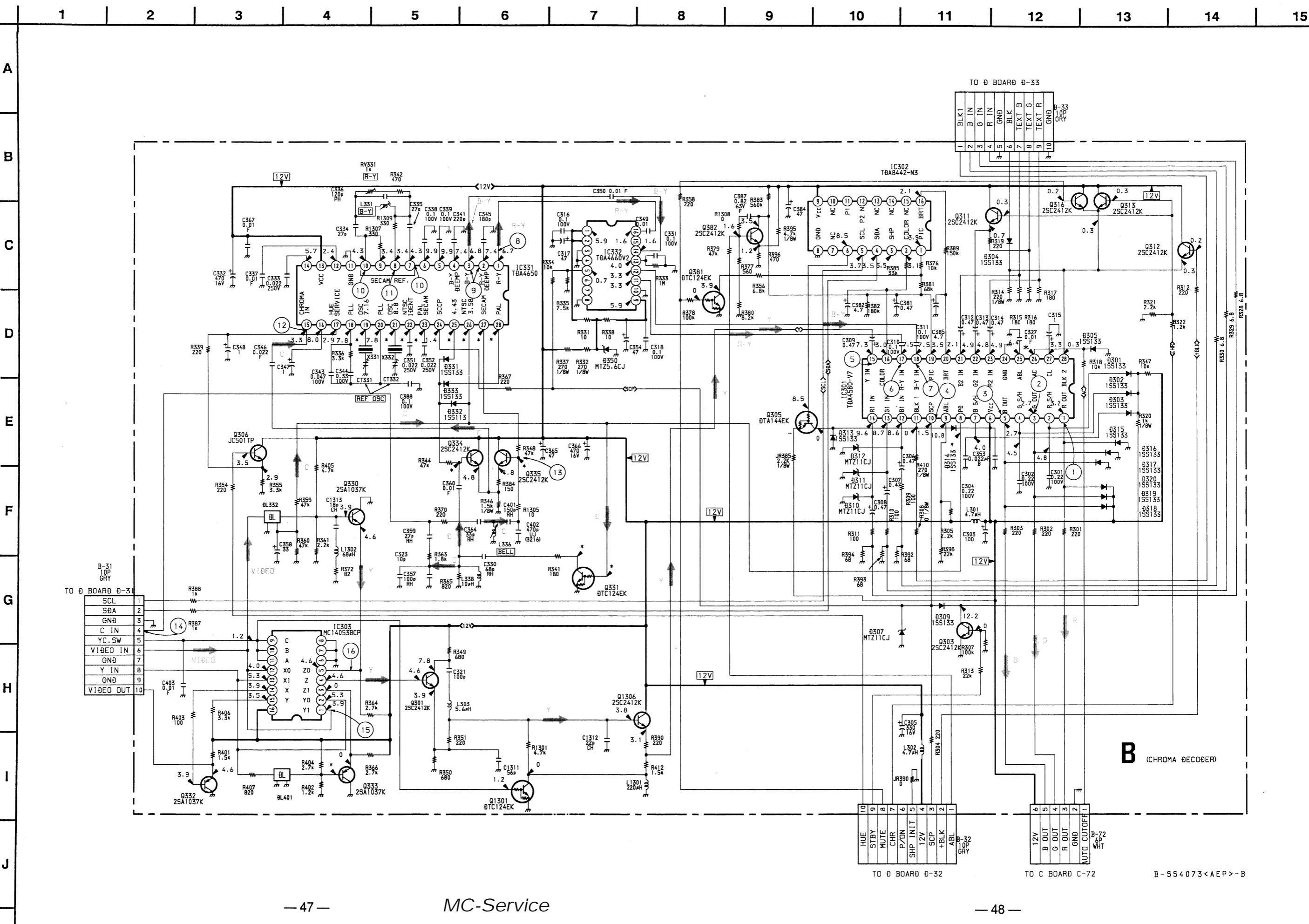
### — B Board —

IC301	TDA4580-V7	VIDEO PROCESSOR
IC302	TDA8442-N3	D/A CONVERTER IC BUS
IC303	MC14053BCP	Y/C COMP SW
IC331	TDA4650-V4	COLOR PROCESSOR
IC332	TDA4660V2	1H-DELAY
Q301	2SC2412K	Y BUFFER
Q303	2SC2412K	STBY SW
Q305	DTA144EK	ANTI PRIORITY SCART
Q306	JCS101TP	VIDEO BUFF
Q311	2SC2412K	ON SCREEN DISPLAY SW
Q312	2SC2412K	CANAL +BLK
Q313	2SC2412K	ON SCREEN DISPLAY
Q316	2SC2412K	FAS PICTURE MUTE SW
Q330	2SA1037K	VIDEO AMP
Q331	DTA124EK	NTSC SW
Q332	2SA1037K	VIDEO BUFF
Q333	2SA1037K	Y AMP
Q334	2SC2412K	PAL/NTSC SW
Q335	2SC2412K	SECAM SW
Q381	DTA124EK	MUTE
Q382	2SC2412K	ABL
Q1301	DTA124EK	Y BUFF
Q1306	2SC2412K	Y OUT
Q301	ISSI133	ACO AT STBY
Q302	ISSI133	ACO AT STBY
Q303	ISSI133	ACO AT STBY
Q304	ISSI133	DECOPPLING BLK
Q305	ISSI133	PROTECT
Q307	MTZ11CJ	PROTECT
Q309	ISSI133	PROTECT
Q310	MTZ11CJ	PROTECT
Q311	MTZ11CJ	PROTECT
Q312	MTZ11CJ	PROTECT
Q313	ISSI133	PROTECT
Q314	ISSI133	PROTECT
Q315	ISSI133	PROTECT
Q316	ISSI133	PROTECT
Q318	ISSI133	PROTECT
Q319	ISSI133	PROTECT
Q320	ISSI133	PROTECT
Q331	ISSI133	SECAM SW
Q332	ISSI133	SECAM SW
Q333	ISSI133	SECAM SW
Q350	MTZ5.6CJ	PROTECT

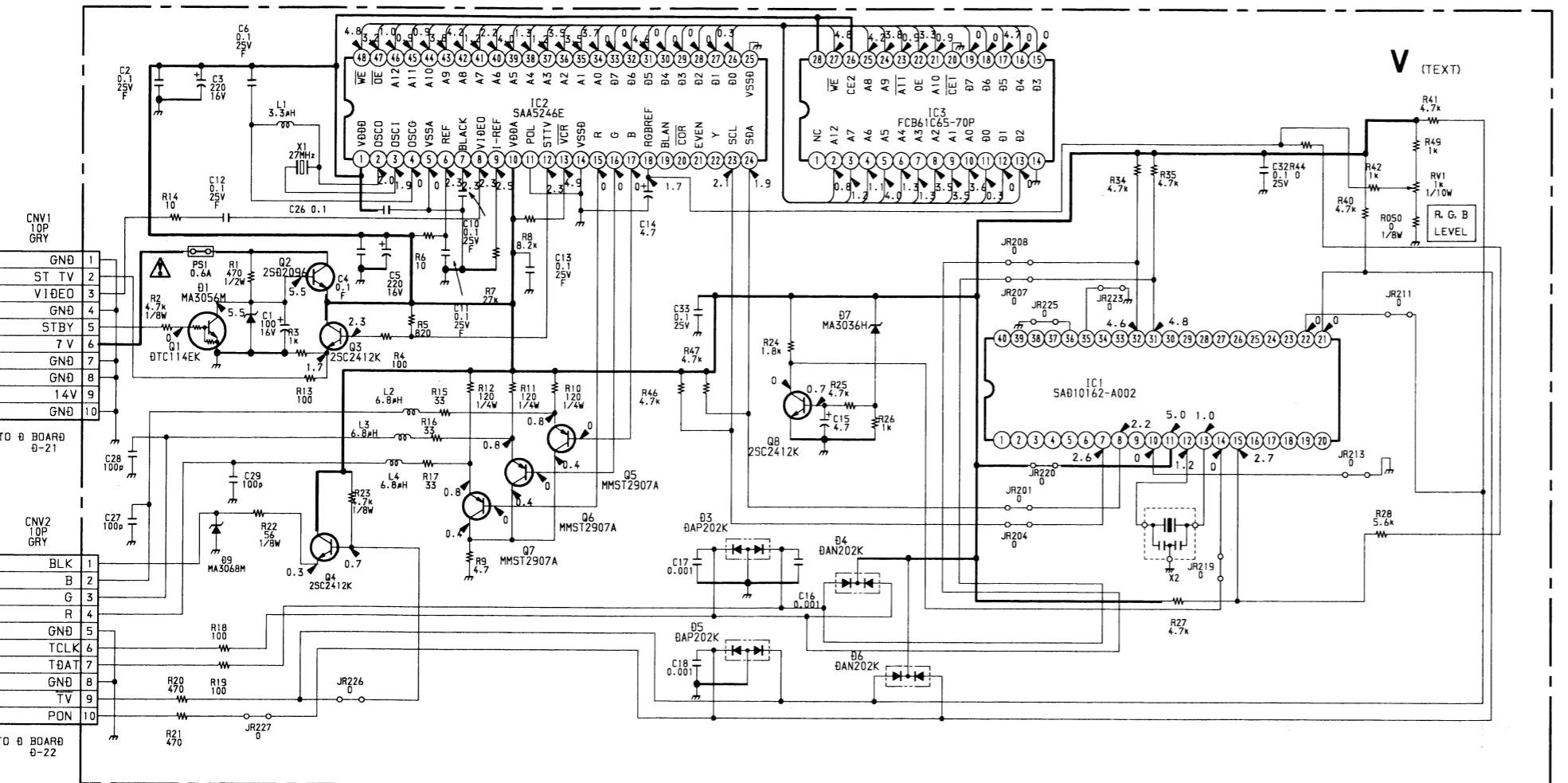
### — B Board —

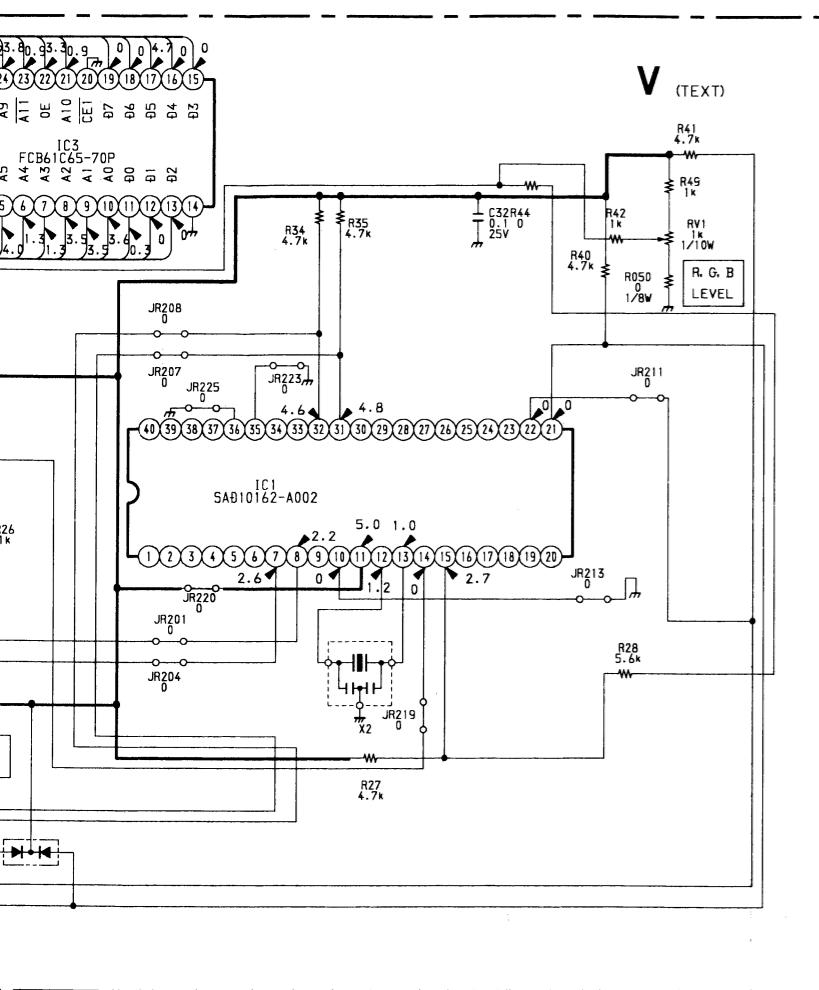
As to the voltage value shown by the mark \* on the Schematic Diagram, see the another list.

	PAL	SECAM	NTSC3.58	NTSC4.43
IC301 (1)	0.1	0.1	5.8	0.1
(2)	6.7	6.8	5.1	5.1
IC331 (1)	3.1	3.6	3.1	2.8
(2)	3.0	3.5	2.9	2.7
(3)	5.6	5.6	7.1	7.2
(4)	7.5	7.0	5.6	5.6
(5)	0.1	0.1	0.1	0.1
(6)	0.1	5.8	0.1	0.1
(7)	0.1	0.1	0.1	0.1
(8)	5.9	0.1	0.1	0.1
(9)	0.1	0.1	5.8	0.1
(10)	1.5	1.9	0	0.8
(11)	3.4	4.4	4.4	4.8
(12)	0.1	4.8	0.1	0.1



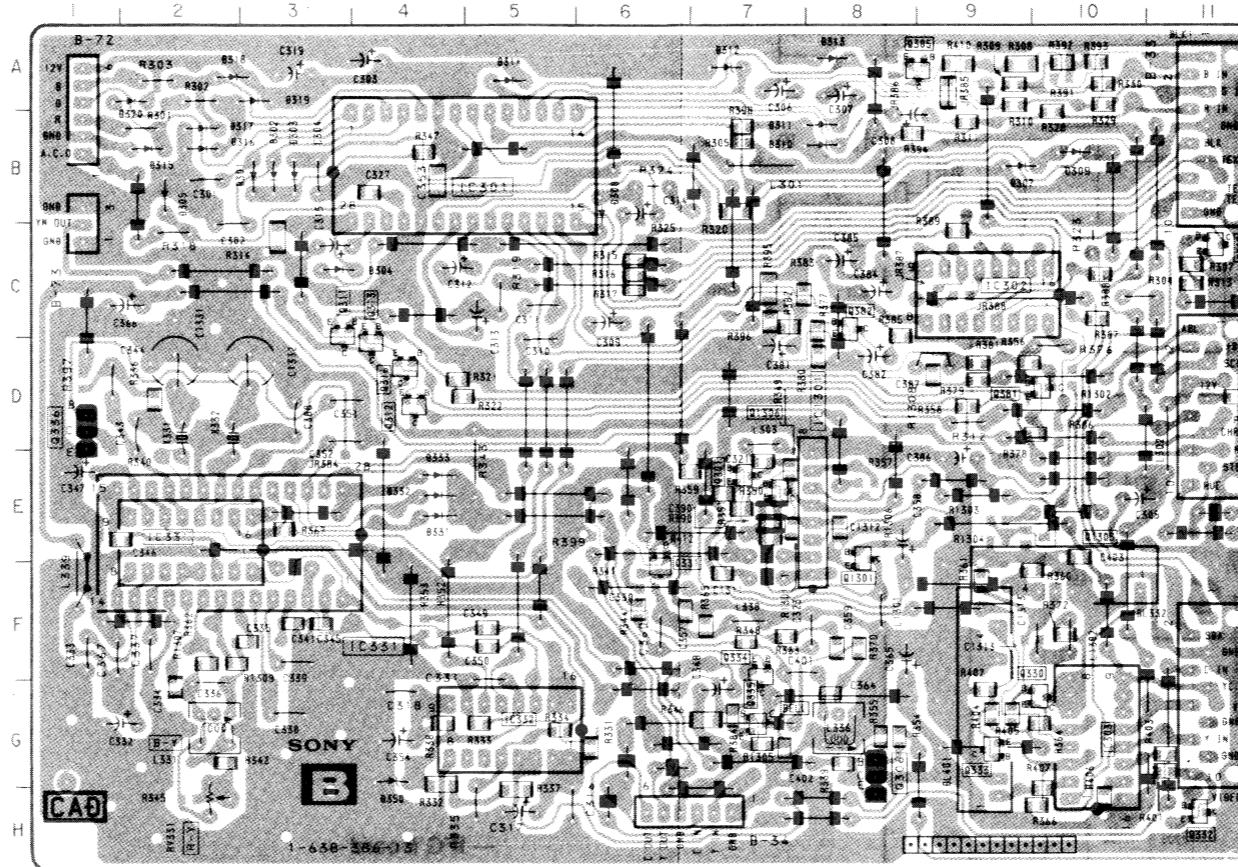
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11





**B** [CHROMA DECODER] **V** [TEXT]

— B Board —

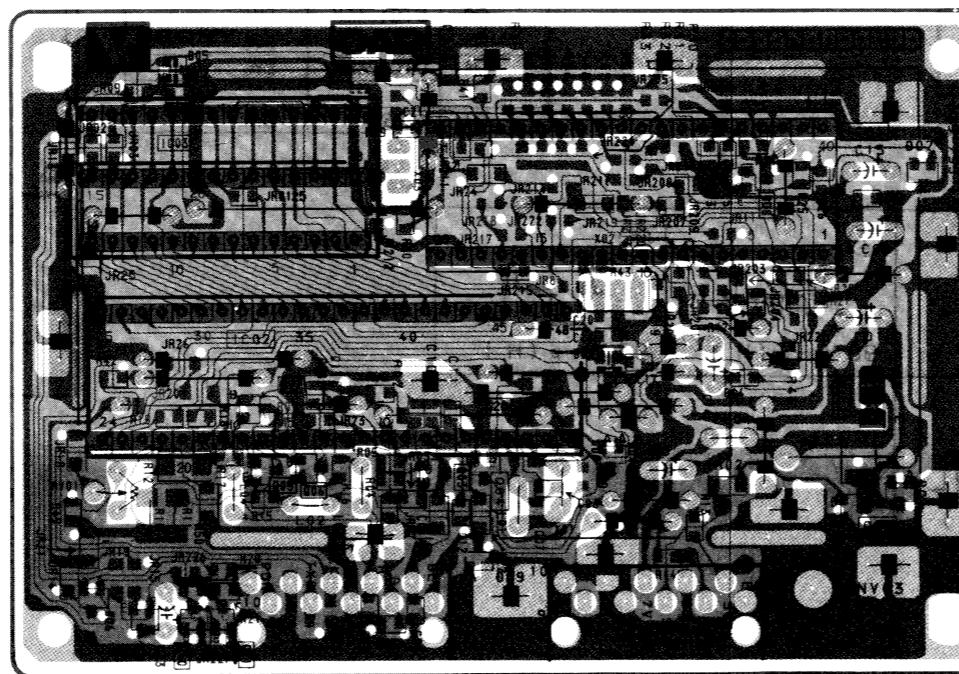


— B Board —

IC		D304 C - 3
IC301 B - 5		D305 B - 2
IC302 C - 9		D307 B - 9
IC303 G - 10		D309 B - 10
IC331 E - 2		D310 B - 8
IC332 G - 5		D311 B - 8
 TRANSISTOR		D312 A - 7
Q301 E - 7		D313 A - 8
Q303 C - 11		D314 A - 5
Q305 A - 9		D315 B - 2
Q306 G - 9		D316 B - 2
Q311 C - 3		D317 B - 2
Q312 D - 4		D318 A - 2
Q313 C - 4		D319 A - 3
Q316 D - 4		D320 A - 2
Q330 G - 10		D331 E - 4
Q331 F - 6		D332 E - 4
Q332 H - 11		D333 E - 4
Q333 G - 9		D350 G - 4
 TRIMMER		
Q334 F - 7		CT331 D - 2
Q335 G - 8		CT332 D - 3
 VARIABLE RESISTOR		
Q381 D - 10		
Q382 C - 8		
Q1301 E - 8		
Q1306 E - 7		
 DIODE		
D301 B - 3		RV331 H - 2
D302 B - 3		
D303 B - 3		

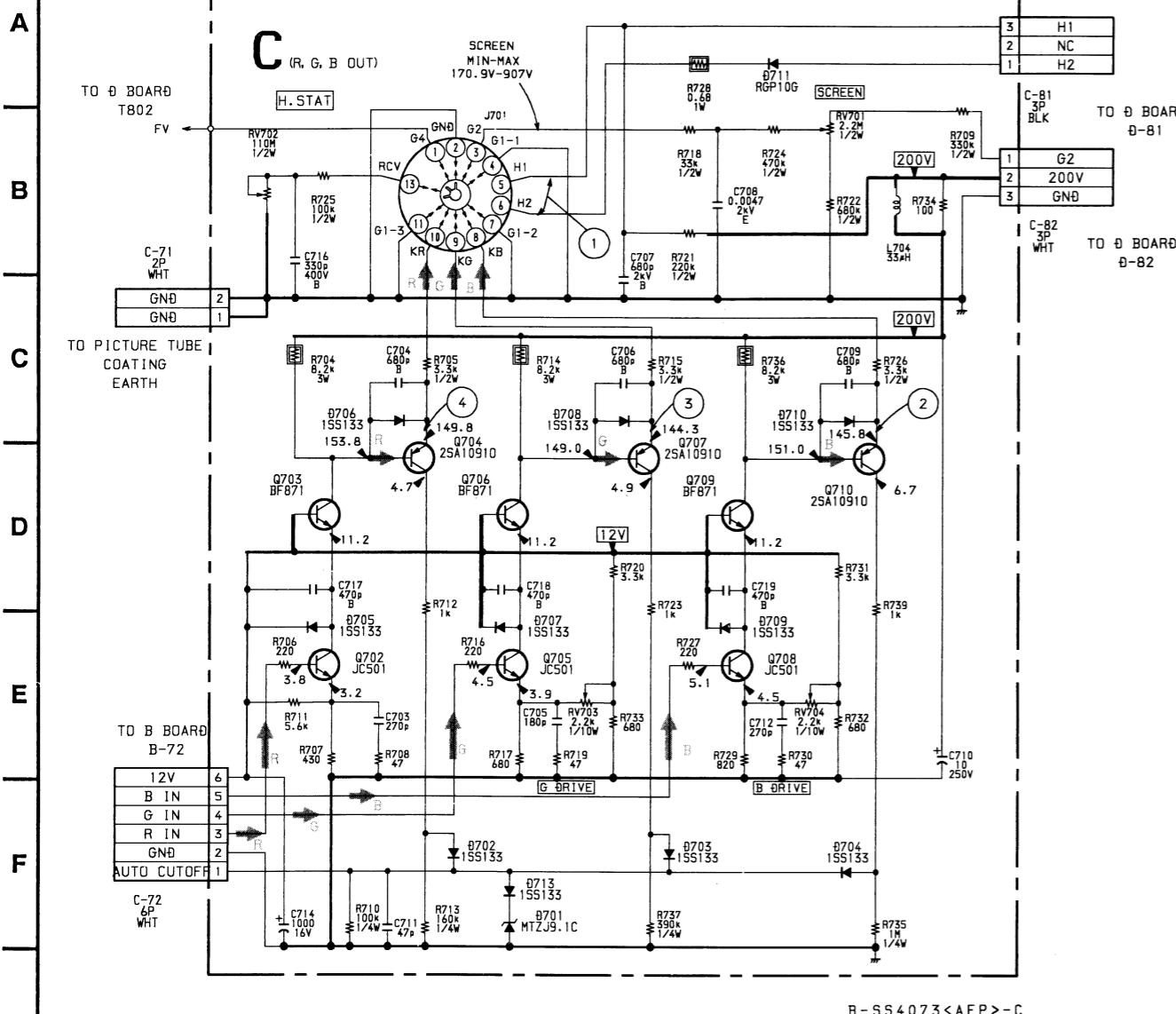
— V Board —

B-554073<AEPI>-1



- : Conductor side pattern
- : Component side pattern

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



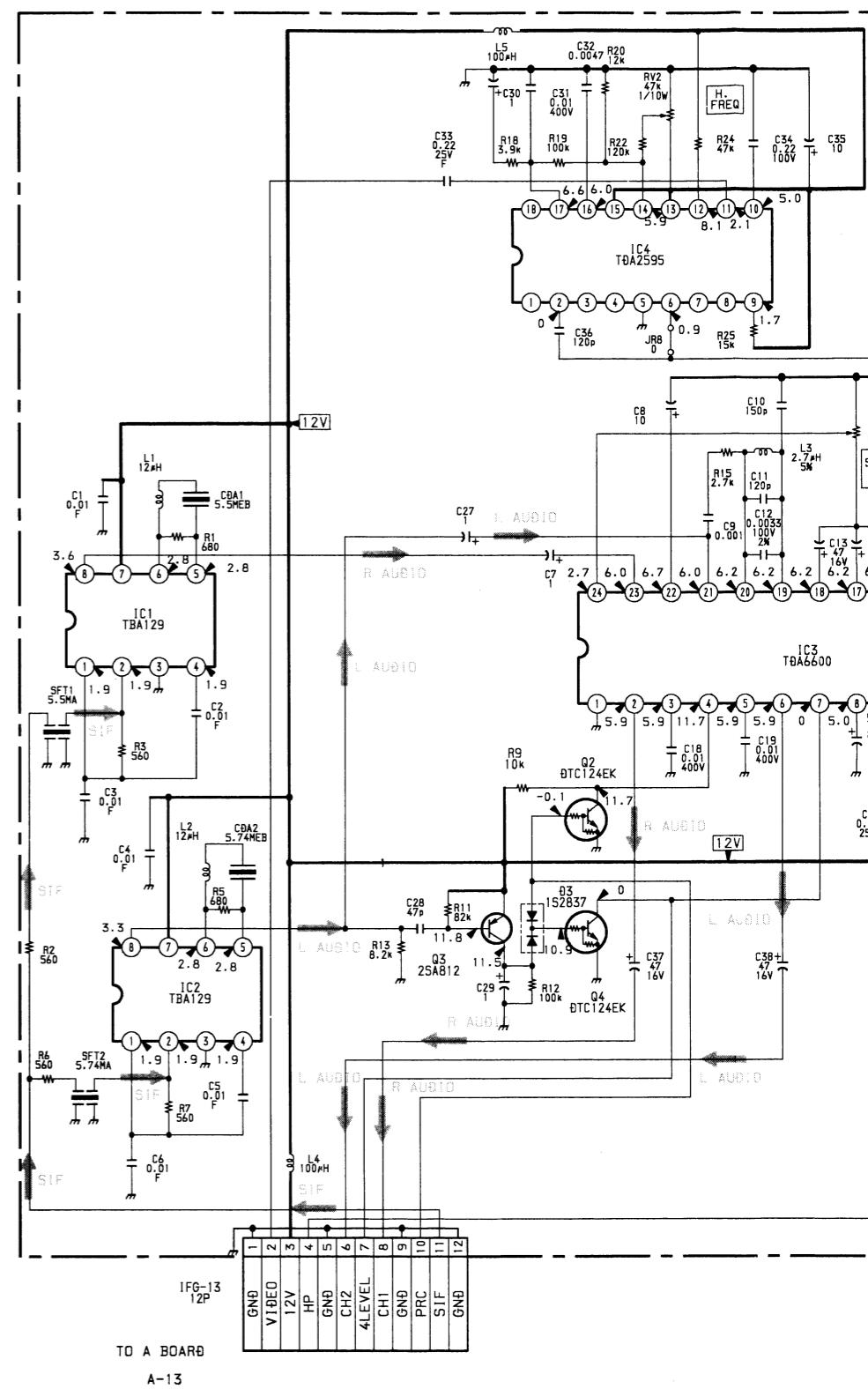
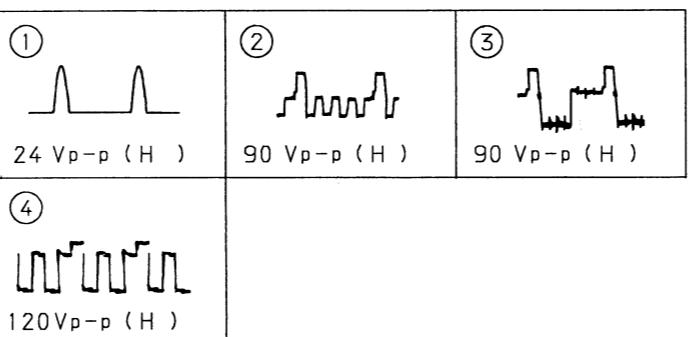
— IFG Board —

IC1	TBA129	5.5 DET
IC2	TBA129	SIF DET AMP
IC3	TDA6600-2	H. FRWQ AMP
IC4	TDA2595/V9	
Q2	DTC124EK	SW
Q3	2SA812	SW
Q4	DTC124EK	SW
D3	1S2837	SW

— C Board —

Q702	JC501	R DRIVE
Q703	ΦB871	R OUT
Q704	2SA10910	ACO MEASURING
Q705	JC501	G DRIVE
Q706	BF871	G OUT
Q707	2SA10910	ACO MEASURING
Q708	JC501	B DRIVE
Q709	BF871	B OUT
Q710	2SA10910	ACO MEASURING
Q701	MTZJ9.1C	PROTECT
Q702	1SS133	PROTECT
Q703	1SS133	PROTECT
Q704	1SS133	PROTECT
Q705	1SS133	PROTECT
Q706	1SS133	PROTECT
Q707	1SS133	PROTECT
Q708	1SS133	PROTECT
Q709	1SS133	PROTECT
Q710	1SS133	PROTECT
Q711	RGP10G	HEATING VOLTAGE REC
Q713	1SS133	PROTECT

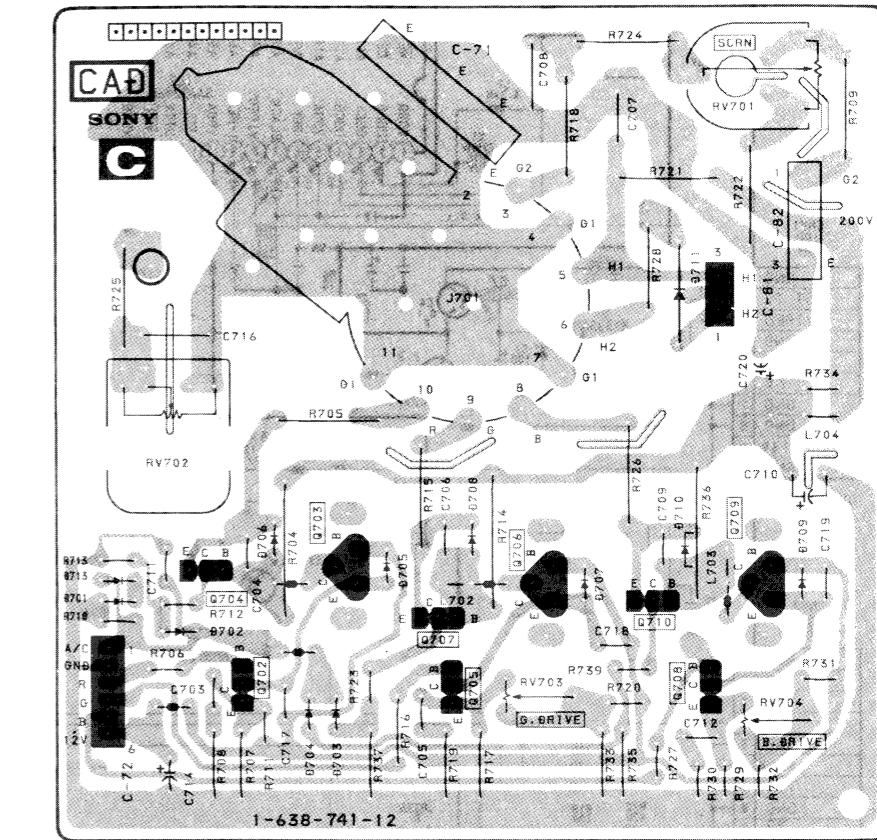
— C Board —



C [R.G.B. OUT]

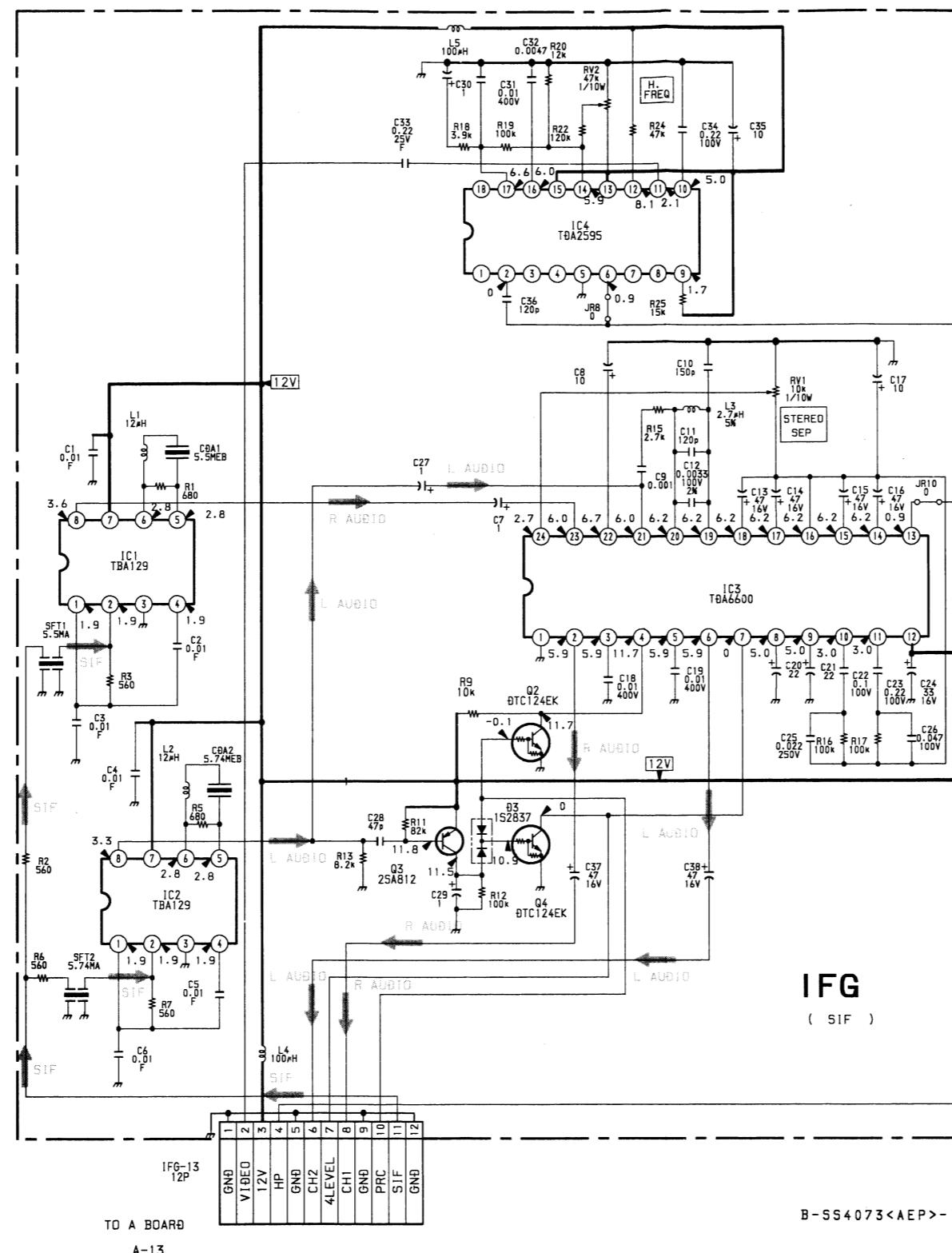
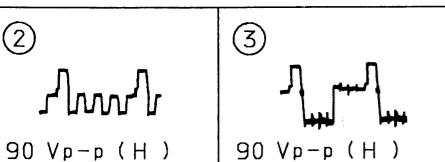
IFG  
[SIF]

— C Board —



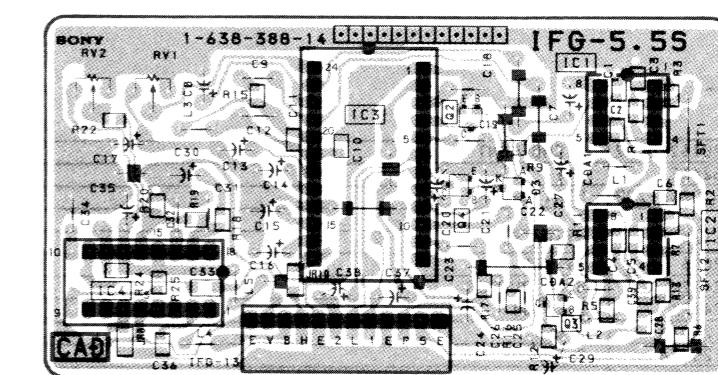
— IFG Board —

IC1	TBA129	5.5 DET
IC2	TBA129	SIF DET AMP
IC3	TDA6600-2	H. FRWQ AMP
IC4	TDA2595/V9	
Q2	DTC124EK	SW
Q3	2SA812	SW
Q4	DTC124EK	SW
D3	1S2837	SW



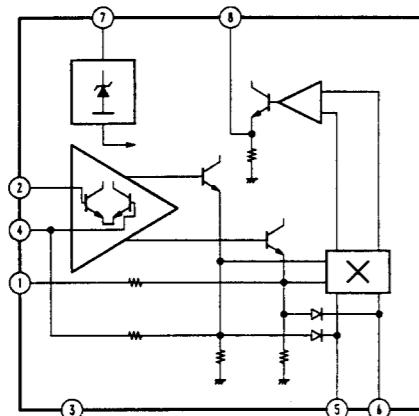
B-554073<AEPI>-1

— IFG Board —

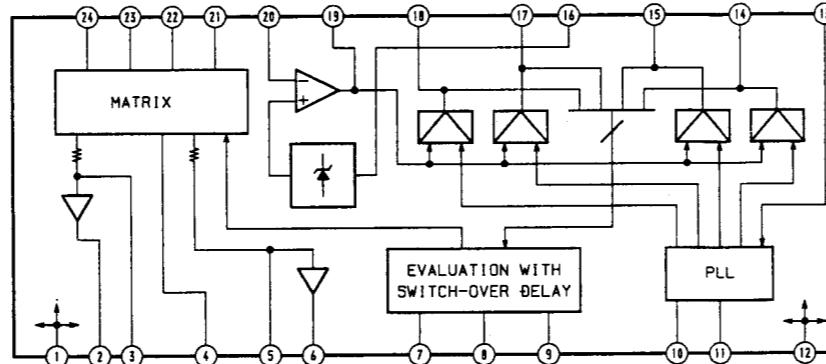


MC-Service

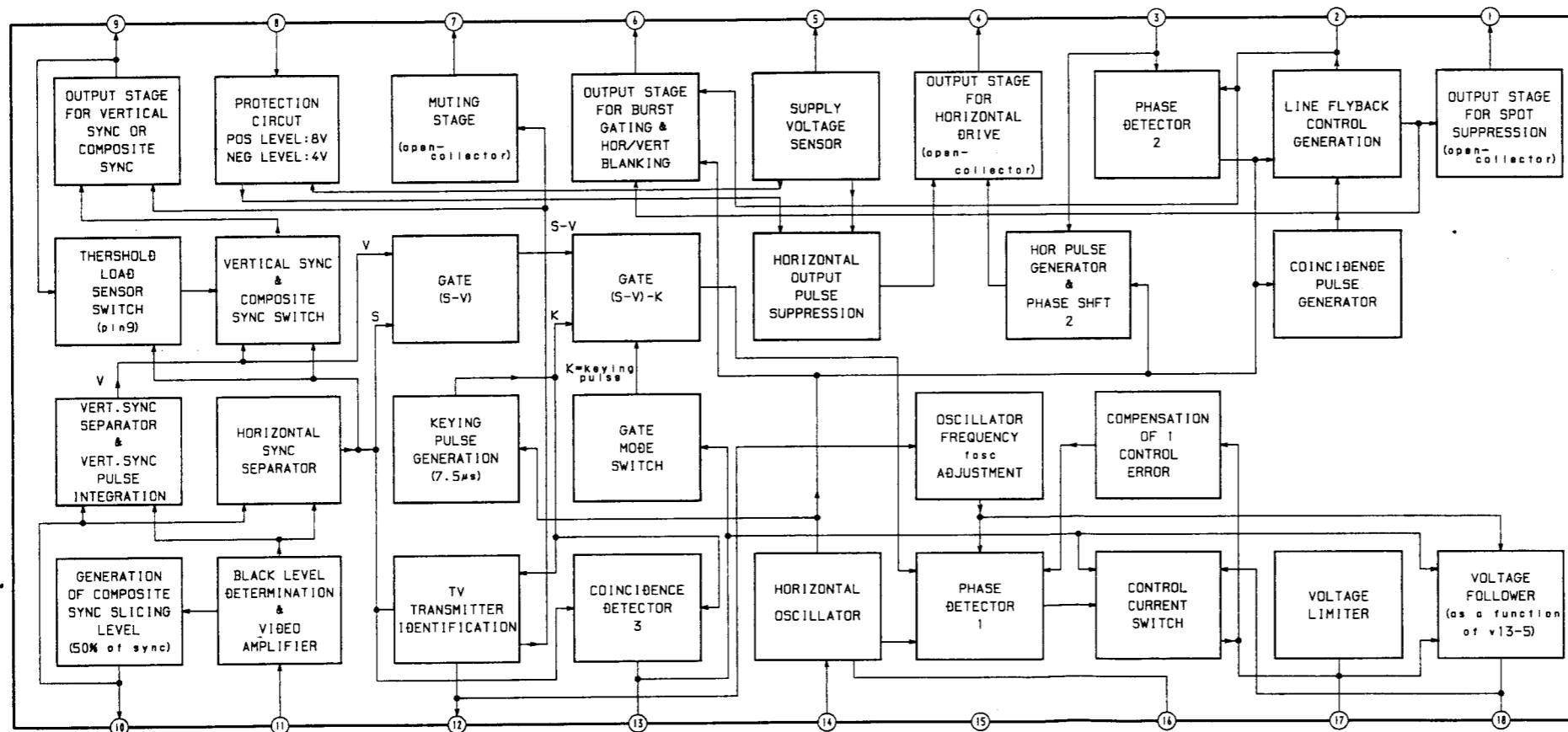
IFG BOARD IC1/IC2 TBA129



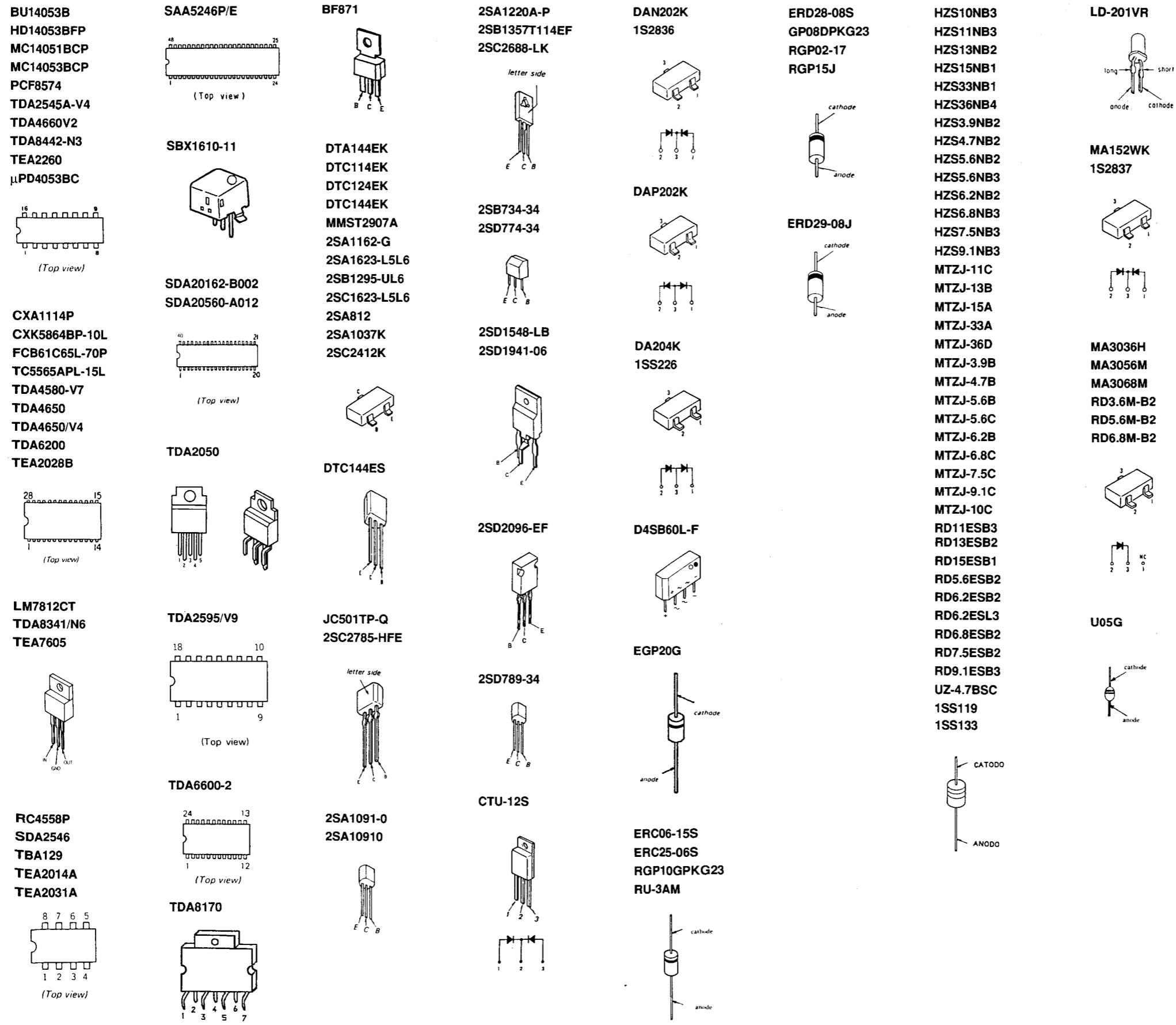
IFG BOARD IC3 TDA6600



IFG BOARD IC4 TDA2595



## 5-4. SEMICONDUCTORS



## SECTION 6

### EXPLODED VIEWS

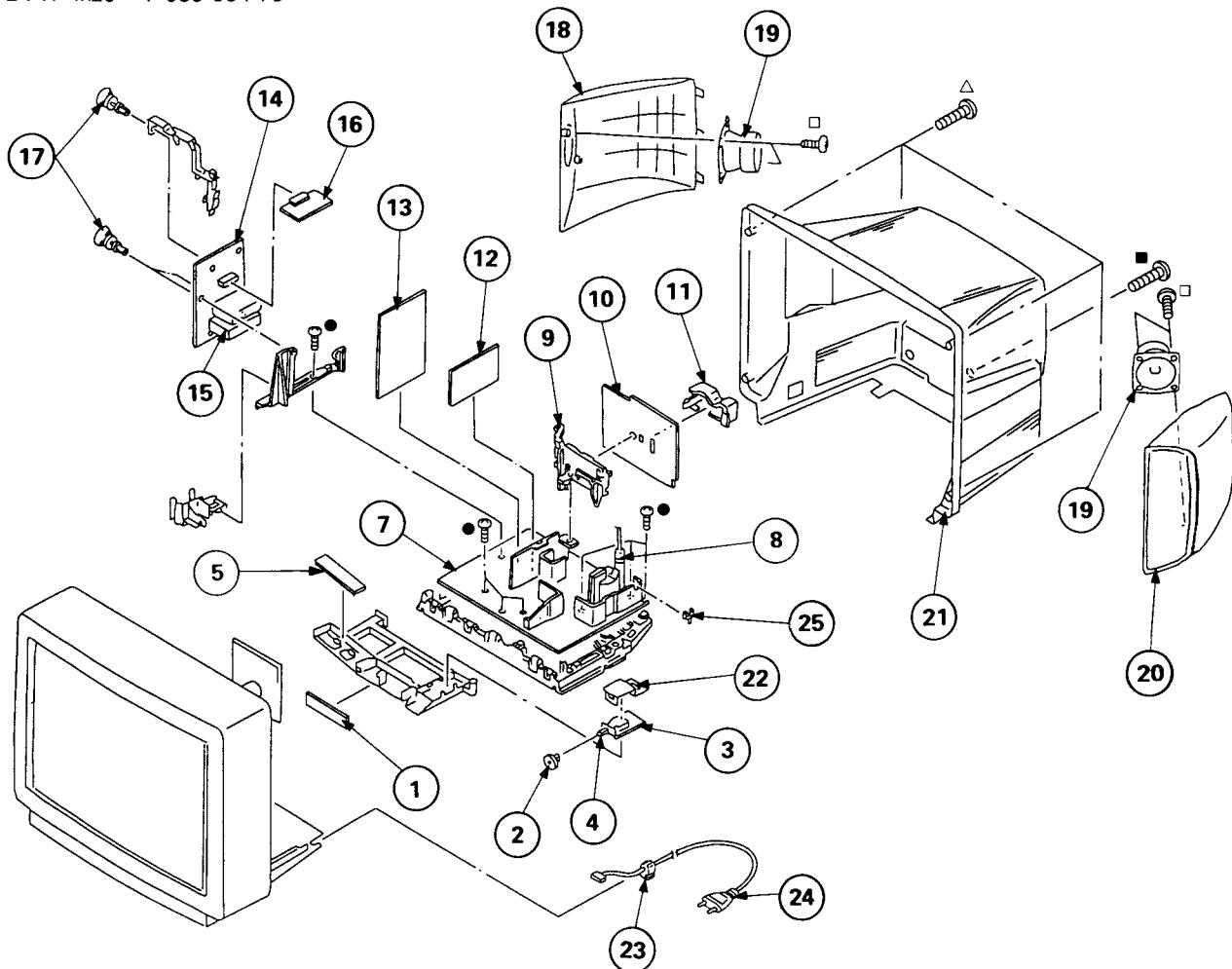
**NOTE:**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

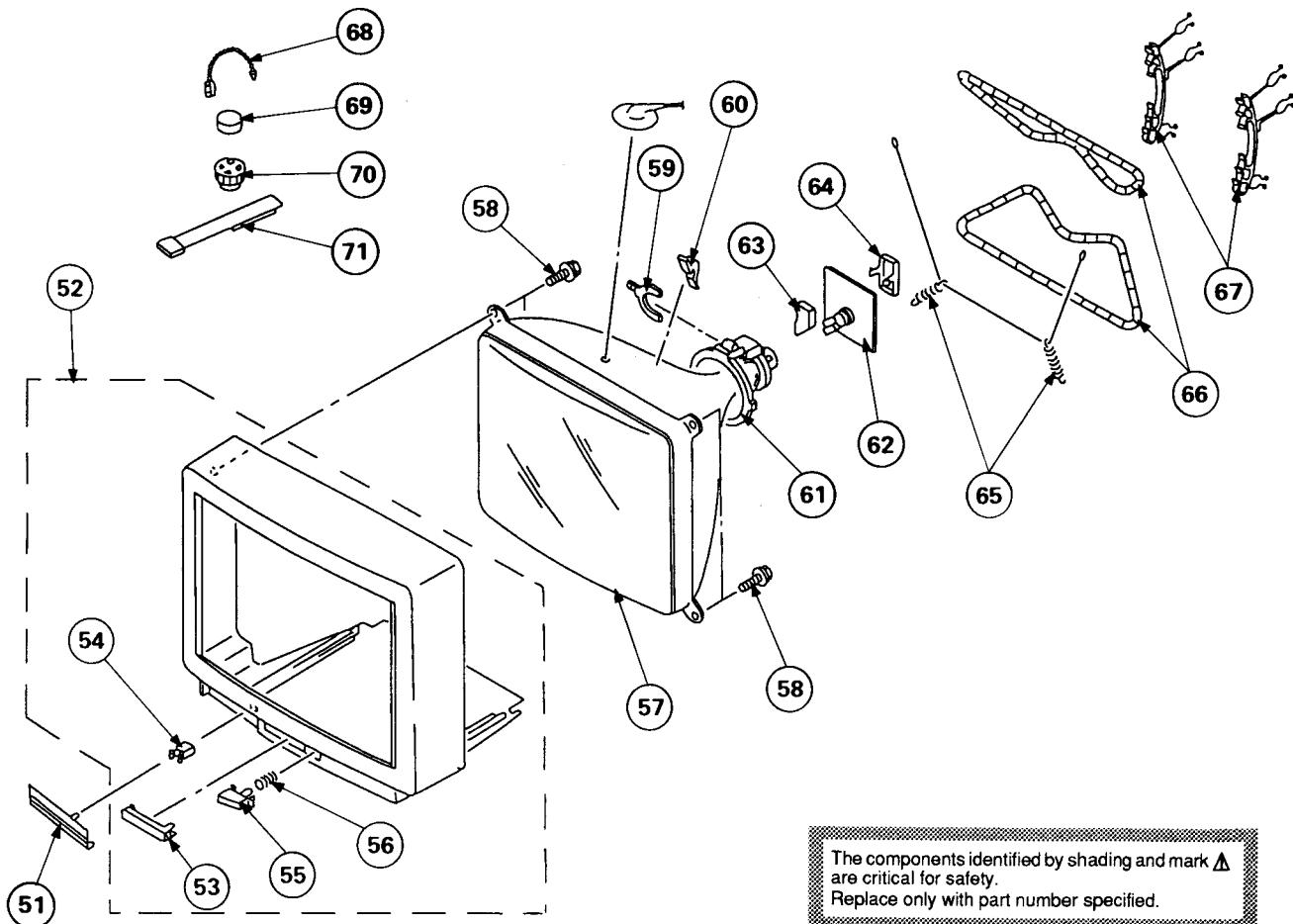
#### 6-1. CHASSIS

- : BVTP3x12 7-685-648-79
- : BVTP4x16 7-685-663-79
- : BVTP3x20 7-685-651-79
- $\Delta$  : BVTP4x20 7-685-664-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	*1-638-745-11	H2 BOARD		14	*A-1632-054-A	A BOARD, COMPLETE	
2	4-386-611-11	COVER, SWITCH		15	$\Delta$ .1-465-301-11	TUNER, ET (UV-816(PLL))	
3	*1-638-743-11	F BOARD		16	*A-1654-005-A	IFG BOARD, COMPLETE	
4	$\Delta$ .1-571-433-12	SWITCH, PUSH (AC POWER)		17	4-386-618-01	RIVET, T TYPE	
5	*1-638-744-11	H1 BOARD		18	X-4200-092-1	BAFFLE BOARD ASSY (L)	
7	*A-1642-067-A	D BOARD, COMPLETE		19	1-544-728-11	SPEAKER (7.5X13CM)	
8	$\Delta$ .1-439-416-51	TRANSFORMER ASSY, FLYBACK (UX-1650)		20	X-4200-093-1	BAFFLE BOARD ASSY (R)	
9	*4-386-624-01	BRACKET, J		21	4-200-932-01	COVER, REAR	
10	*A-1651-023-A	J1 BOARD, COMPLETE		22	4-200-274-11	COVER, POWER SWITCH	
11	4-200-014-11	BRACKET, TERMINAL		23	$\Delta$ .4-389-201-03	HOLDER, AC CORD	
12	*A-1645-022-A	V BOARD, COMPLETE		24	$\Delta$ .1-590-501-11	CORD, POWER (WITH NOISE FILTER)	
13	*A-1621-036-A	B BOARD, COMPLETE		25	*3-646-071-00	HOLDER, WIRE	

## 6-2. PICTURE TUBE



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-200-939-01	DOOR (PAINTED)		62	*A-1638-018-A	C BOARD, COMPLETE	
52	X-4200-091-1	CABINET ASSY (WITH BEZEL ASSY)	53~56	63	*4-379-167-01	COVER (MAIN), CV	
53	4-200-148-01	WINDOW, ORNAMENTAL		64	*4-379-160-01	COVER (REAR LID), CV	
54	4-392-036-01	CATCHER, PUSH		65	4-200-433-11	SPRING, EXTENSION	
55	4-200-886-11	BUTTON, POWER		66	$\Delta$ .1-426-383-11	COIL, DEMAGNETIZATION	
56	4-329-112-00	SPRING		67	*4-386-622-11	BAND, DGC	
57	$\Delta$ .8-738-758-05	PICTURE TUBE (A51JXH61X)		68	4-308-870-00	CLIP, LEAD WIRE	
58	4-382-733-01	SCREW (S), PT		69	1-452-032-00	MAGNET, DISK; 10MM $\phi$	
59	1-452-277-00	MAGNET, BMC		70	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM $\phi$	
60	3-704-495-01	SPACER, DY		71	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	
61	$\Delta$ .1-451-295-11	DEFLECTION YOKE (Y21PFA2)					

# SECTION 7

## ELECTRICAL PARTS LIST

**B**

**NOTE:**

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

**CAPACITORS**

MF:  $\mu\text{F}$ , PF:  $\mu\mu\text{F}$

**COILS**

MMH: mH, UH:  $\mu\text{H}$

**RESISTORS**

- All resistors are in ohms
- F: nonflammable

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
* A-1621-036-A	B BOARD, COMPLETE			C351	1-137-102-11	FILM 0.022MF	10% 250V
	*****			C352	1-137-102-11	FILM 0.022MF	10% 250V
	<CONNECTOR>			C353	1-163-063-00	CERAMIC CHIP 0.022MF	10% 50V
B31	*1-565-393-11	CONNECTOR, BOARD TO BOARD		C354	1-124-910-11	ELECT 47MF	20% 50V
B32	*1-565-393-11	CONNECTOR, BOARD TO BOARD		C357	1-163-377-11	CERAMIC CHIP 100PF	5% 50V
B33	*1-565-393-11	CONNECTOR, BOARD TO BOARD		C358	1-124-917-11	ELECT 33MF	20% 50V
B72	*1-568-881-51	PIN, CONNECTOR 6P		C359	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
	<CAPACITOR>			C360	1-101-004-00	CERAMIC 0.01MF	50V
C301	1-137-031-11	FILM 0.22MF	10% 100V	C364	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C302	1-137-031-11	FILM 0.22MF	10% 100V	C365	1-124-910-11	ELECT 47MF	20% 50V
C303	1-124-122-11	ELECT 100MF	20% 50V	C366	1-126-103-11	ELECT 470MF	20% 16V
C304	1-137-031-11	FILM 0.22MF	10% 100V	C367	1-101-004-00	CERAMIC 0.01MF	50V
C305	1-124-119-00	ELECT 330MF	20% 16V	C381	1-124-902-00	ELECT 0.47MF	20% 50V
C306	1-124-902-00	ELECT 0.47MF	20% 50V	C382	1-124-927-11	ELECT 4.7MF	20% 50V
C307	1-124-902-00	ELECT 0.47MF	20% 50V	C384	1-124-910-11	ELECT 47MF	20% 50V
C308	1-124-902-00	ELECT 0.47MF	20% 50V	C385	1-124-927-11	ELECT 4.7MF	20% 50V
C309	1-124-902-00	ELECT 0.47MF	20% 50V	C387	1-137-027-11	FILM 0.82MF	10% 63V
C310	1-137-098-11	FILM 0.1MF	10% 100V	C388	1-137-098-11	FILM 0.1MF	10% 100V
C311	1-137-098-11	FILM 0.1MF	10% 100V	C401	1-101-361-00	CERAMIC 150PF	5% 50V
C312	1-124-902-00	ELECT 0.47MF	20% 50V	C402	1-163-197-00	CERAMIC CHIP 470PF	5% 50V
C313	1-124-902-00	ELECT 0.47MF	20% 50V	C403	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C314	1-124-902-00	ELECT 0.47MF	20% 50V	C1311	1-163-111-00	CERAMIC CHIP 56PF	5% 50V
C315	1-124-903-11	ELECT 1MF	20% 50V	C1312	1-163-235-11	CERAMIC CHIP 22PF	5% 50V
	<TRIMMER>			C1313	1-102-953-00	CERAMIC 18PF	5% 50V
C316	1-137-098-11	FILM 0.1MF	10% 100V	CT331	1-141-181-11	CAP. TRIMMER	
C317	1-124-910-11	ELECT 47MF	20% 50V	CT332	1-141-181-11	CAP. TRIMMER	
C318	1-137-098-11	FILM 0.1MF	10% 100V				
C321	1-163-117-00	CERAMIC CHIP 100PF	5% 50V				
C323	1-102-947-00	CERAMIC 10PF	0.5PF 50V				
	<DIODE>						
C327	1-163-031-11	CERAMIC CHIP 0.01MF	50V	D301	8-719-911-19	DIODE ISS119	
C330	1-163-113-00	CERAMIC CHIP 68PF	5% 50V	D302	8-719-911-19	DIODE ISS119	
C331	1-137-098-11	FILM 0.1MF	10% 100V	D303	8-719-911-19	DIODE ISS119	
C332	1-126-103-11	ELECT 470MF	20% 16V	D304	8-719-911-19	DIODE ISS119	
C333	1-137-102-11	FILM 0.022MF	10% 250V	D305	8-719-911-19	DIODE ISS119	
C334	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	D307	8-719-110-23	DIODE RD11ES-B3	
C335	1-163-237-11	CERAMIC CHIP 27PF	5% 50V	D309	8-719-911-19	DIODE ISS119	
C336	1-102-816-00	CERAMIC 120PF	5% 50V	D310	8-719-110-23	DIODE RD11ES-B3	
C337	1-101-004-00	CERAMIC 0.01MF	50V	D311	8-719-110-23	DIODE RD11ES-B3	
C338	1-137-098-11	FILM 0.1MF	10% 100V	D312	8-719-110-23	DIODE RD11ES-B3	
C339	1-137-098-11	FILM 0.1MF	10% 100V	D313	8-719-911-19	DIODE ISS119	
C341	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	D314	8-719-911-19	DIODE ISS119	
C343	1-137-094-11	FILM 0.047MF	10% 100V	D315	8-719-911-19	DIODE ISS119	
C344	1-137-033-11	FILM 0.33MF	10% 100V	D316	8-719-911-19	DIODE ISS119	
C345	1-163-123-00	CERAMIC CHIP 180PF	5% 50V	D317	8-719-911-19	DIODE ISS119	
C346	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D318	8-719-911-19	DIODE ISS119	
C347	1-124-903-11	ELECT 1MF	20% 50V	D319	8-719-911-19	DIODE ISS119	
C348	1-124-903-11	ELECT 1MF	20% 50V	D320	8-719-911-19	DIODE ISS119	
C349	1-163-031-11	CERAMIC CHIP 0.01MF	50V	D331	8-719-911-19	DIODE ISS119	
C350	1-163-031-11	CERAMIC CHIP 0.01MF	50V				

**B**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D332	8-719-911-19	DIODE ISS119		R313	1-216-081-00	METAL GLAZE	22K 5% 1/10W
D333	8-719-911-19	DIODE ISS119		R314	1-216-182-00	METAL GLAZE	220 5% 1/8W
D350	8-719-109-89	DIODE RD5.6ES-B2		R315	1-216-031-00	METAL GLAZE	180 5% 1/10W
		<DELAY LINE>		R316	1-216-031-00	METAL GLAZE	180 5% 1/10W
DL332	1-236-062-11	MODULE, Y DELAY LINE		R317	1-216-031-00	METAL GLAZE	180 5% 1/10W
DL401	1-415-613-11	DELAY LINE, Y		R318	1-249-429-11	CARBON	10K 5% 1/4W
		<IC>		R319	1-249-409-11	CARBON	220 5% 1/4W
IC301	8-759-517-43	IC TDA4580-V7		R320	1-216-198-00	METAL GLAZE	1K 5% 1/8W
IC302	8-759-980-60	IC TDA8442N3		R321	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
IC303	8-759-140-53	IC UPD4053BC		R322	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
IC331	8-759-521-22	IC TDA4650/V4		R328	1-216-311-00	METAL GLAZE	6.8 5% 1/10W
IC332	8-759-505-39	IC TDA4660V2		R329	1-216-311-00	METAL GLAZE	6.8 5% 1/10W
		<COIL>		R330	1-216-311-00	METAL GLAZE	6.8 5% 1/10W
L301	1-410-868-11	INDUCTOR	4.7UH	R331	1-216-001-00	METAL GLAZE	10 5% 1/10W
L302	1-410-868-11	INDUCTOR	4.7UH	R332	1-216-184-00	METAL GLAZE	270 5% 1/8W
L303	1-408-406-00	INDUCTOR	5.6UH	R333	1-216-001-00	METAL GLAZE	1M 5% 1/10W
L331	1-404-554-11	COIL		R334	1-216-073-00	METAL GLAZE	10K 5% 1/10W
L336	1-404-554-11	COIL		R335	1-247-852-11	CARBON	7.5K 5% 1/4W
L338	1-408-409-00	INDUCTOR	10UH	R336	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
L1301	1-408-425-00	INDUCTOR	220UH	R337	1-216-089-00	METAL GLAZE	270 5% 1/8W
L1302	1-408-419-00	INDUCTOR	68UH	R338	1-216-001-00	METAL GLAZE	10 5% 1/10W
		<TRANSISTOR>		R339	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q301	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R341	1-216-031-00	METAL GLAZE	180 5% 1/10W
Q303	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R342	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q305	8-729-901-06	TRANSISTOR DTA144EK		R344	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q306	8-729-119-78	TRANSISTOR 2SC2785-HFE		R346	1-216-202-00	METAL GLAZE	1.5K 5% 1/8W
Q311	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R347	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q312	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R348	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q313	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R349	1-216-045-00	METAL GLAZE	680 5% 1/10W
Q316	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R350	1-216-045-00	METAL GLAZE	680 5% 1/10W
Q330	8-729-216-22	TRANSISTOR 2SA1162-G		R351	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q331	8-729-901-00	TRANSISTOR DTC124EK		R354	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q332	8-729-216-22	TRANSISTOR 2SA1162-G		R355	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
Q333	8-729-216-22	TRANSISTOR 2SA1162-G		R356	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
Q334	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R358	1-216-033-00	METAL GLAZE	220 5% 1/10W
Q335	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R359	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q381	8-729-901-00	TRANSISTOR DTC124EK		R360	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q382	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R361	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
Q1301	8-729-901-00	TRANSISTOR DTC124EK		R363	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
Q1306	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R364	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
		<RESISTOR>		R365	1-216-047-00	METAL GLAZE	820 5% 1/10W
JR385	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W	R366	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W
JR390	1-216-295-00	METAL GLAZE	0 5% 1/10W	R367	1-216-033-00	METAL GLAZE	220 5% 1/10W
R301	1-249-409-11	CARBON	220 5% 1/4W	R370	1-216-033-00	METAL GLAZE	220 5% 1/10W
R302	1-249-409-11	CARBON	220 5% 1/4W	R372	1-216-023-00	METAL GLAZE	82 5% 1/10W
R303	1-249-409-11	CARBON	220 5% 1/4W	R376	1-249-429-11	CARBON	10K 5% 1/4W
R304	1-249-409-11	CARBON	220 5% 1/4W	R377	1-216-037-00	METAL GLAZE	330 5% 1/10W
R305	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R378	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R307	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R379	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R308	1-216-296-00	METAL GLAZE	0 5% 1/8W	R380	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R309	1-216-025-00	METAL GLAZE	100 5% 1/10W	R381	1-216-093-00	METAL GLAZE	68K 5% 1/10W
R310	1-216-025-00	METAL GLAZE	100 5% 1/10W	R382	1-216-107-00	METAL GLAZE	270K 5% 1/10W
R311	1-216-025-00	METAL GLAZE	100 5% 1/10W	R383	1-216-115-00	METAL GLAZE	560K 5% 1/10W
R312	1-249-409-11	CARBON	220 5% 1/4W	R384	1-216-029-00	METAL GLAZE	150 5% 1/10W
				R385	1-216-085-00	METAL GLAZE	33K 5% 1/10W
				R387	1-216-049-00	METAL GLAZE	1K 5% 1/10W
				R388	1-216-049-00	METAL GLAZE	1K 5% 1/10W
				R389	1-216-101-00	METAL GLAZE	150K 5% 1/10W
				R390	1-216-033-00	METAL GLAZE	220 5% 1/10W
				R392	1-216-021-00	METAL GLAZE	68 5% 1/10W
				R393	1-216-021-00	METAL GLAZE	68 5% 1/10W
				R394	1-216-021-00	METAL GLAZE	68 5% 1/10W
				R395	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W

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**B F A**

REF. NO.	PART NO.	DESCRIPTION				REMARK	REF. NO.	PART NO.	DESCRIPTION				REMARK
R396	1-216-041-00	METAL GLAZE	470	5%	1/10W		C109	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	
R398	1-216-081-00	METAL GLAZE	22K	5%	1/10W		C111	1-124-925-11	ELECT	2.2MF	20%	50V	
R401	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W		C115	1-124-925-11	ELECT	2.2MF	20%	50V	
R402	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W		C127	1-124-122-11	ELECT	100MF	20%	50V	
R403	1-216-025-00	METAL GLAZE	100	5%	1/10W		C128	1-124-910-11	ELECT	47MF	20%	50V	
R404	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W		C129	1-124-910-11	ELECT	47MF	20%	50V	
R405	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		C138	1-136-165-00	FILM	0.1MF	5%	50V	
R406	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W		C171	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
R407	1-216-047-00	METAL GLAZE	820	5%	1/10W		C172	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	
R410	1-216-184-00	METAL GLAZE	270	5%	1/8W		C177	1-102-074-00	CERAMIC	0.001MF	10%	50V	
R412	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W		C181	1-101-004-00	CERAMIC	0.01MF		50V	
R1301	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W				<IC>				
R1305	1-216-001-00	METAL GLAZE	10	5%	1/10W		IC103	8-759-979-62	IC PCF8574				
R1307	1-216-037-00	METAL GLAZE	330	5%	1/10W				<COIL>				
R1308	1-216-295-00	METAL GLAZE	0	5%	1/10W				<CRYSTAL>				
R1309	1-216-037-00	METAL GLAZE	330	5%	1/10W		L100	1-410-683-31	INDUCTOR	560UH			
RV331	1-238-012-11	RES, ADJ, CARBON 1K					L101	1-408-225-00	INDUCTOR	3.3UH			
							L102	1-408-413-00	INDUCTOR	22UH			
							L107	1-408-397-00	INDUCTOR	1UH			
									<TRANSISTOR>				
X331	1-567-307-11	OSCILLATOR, CRYSTAL					Q113	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
X332	1-567-131-00	OSCILLATOR, CRYSTAL					Q114	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
							Q115	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
*****	*****	*****					Q116	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
*1-638-743-11	F BOARD	*****					Q125	8-729-900-89	TRANSISTOR	DTC144ES			
							Q126	8-729-901-06	TRANSISTOR	DTA144EK			
							Q181	8-729-120-28	TRANSISTOR	2SC1623-L5L6			
									<CONNECTOR>				
F61	*1-580-690-11	PIN, CONNECTOR (PC BOARD)	4P						<RESISTOR>				
F62	*1-580-690-11	PIN, CONNECTOR (PC BOARD)	4P				JR230	1-216-295-00	METAL GLAZE	0	5%	1/10W	
							JR252	1-216-296-00	METAL GLAZE	0	5%	1/8W	
							JR253	1-216-296-00	METAL GLAZE	0	5%	1/8W	
							JR255	1-216-296-00	METAL GLAZE	0	5%	1/8W	
							JR256	1-216-296-00	METAL GLAZE	0	5%	1/8W	
									<CONNECTOR>				
							JR257	1-216-296-00	METAL GLAZE	0	5%	1/8W	
							JR258	1-216-296-00	METAL GLAZE	0	5%	1/8W	
							R101	1-216-025-00	METAL GLAZE	100	5%	1/10W	
							R105	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
							R107	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
							R108	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
							R110	1-249-429-11	CARBON	10K	5%	1/4W	
							R111	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
							R116	1-216-023-00	METAL GLAZE	82	5%	1/10W	
							R118	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
							R128	1-216-027-00	METAL GLAZE	120	5%	1/10W	
							R129	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
							R130	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
							R157	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
							R158	1-249-409-11	CARBON	220	5%	1/4W	
							R159	1-249-409-11	CARBON	220	5%	1/4W	
							R161	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
							R162	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
							R163	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
							R164	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
							R165	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
							R167	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
							R168	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
							R169	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	

A

C

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**D**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
*A-1642-067-A	D BOARD, COMPLETE			C519	1-136-173-00	FILM	0.47MF 5%
	*****			C520	1-164-161-11	CERAMIC CHIP	0.0022MF 10%
4-200-001-11	HOLDER, IC			C521	1-137-098-11	FILM	0.1MF 10%
4-201-023-01	SPACER, INSULATING			C522	1-124-122-11	ELECT	100MF 20%
*4-341-751-01	EYELET			C523	1-108-680-11	MYLAR	0.001MF 10%
*4-341-752-01	EYELET			C524	1-108-798-11	MYLAR	0.0033MF 5%
*4-368-683-01	SPRING			C525	1-163-117-00	CERAMIC CHIP	100PF 5%
<CAPACITOR>				C526	1-163-103-00	CERAMIC CHIP	27PF 5%
				C527	1-137-098-11	FILM	0.1MF 10%
				C528	1-124-190-00	ELECT	680MF 10%
				C529	1-124-122-11	ELECT	100MF 20%
C002	1-163-205-00	CERAMIC CHIP	0.001MF 5%	C530	1-137-096-11	FILM	0.068MF 10%
C003	1-124-925-11	ELECT	2.2MF 20%	C531	1-124-120-11	ELECT	220MF 20%
C004	1-124-120-11	ELECT	220MF 20%	C532	1-131-363-00	TANTALUM	4.7MF 10%
C005	1-124-903-11	ELECT	1MF 20%	C533	1-124-903-11	ELECT	1MF 20%
C008	1-163-117-00	CERAMIC CHIP	100PF 5%	C534	1-108-680-11	MYLAR	0.001MF 10%
C009	1-163-117-00	CERAMIC CHIP	100PF 5%	C535	1-163-129-00	CERAMIC CHIP	330PF 5%
C010	1-124-120-11	ELECT	220MF 20%	C536	1-163-009-11	CERAMIC CHIP	0.001MF 10%
C011	1-163-031-11	CERAMIC CHIP	0.01MF 5%	C537	1-124-122-11	ELECT	100MF 20%
C013	1-137-098-11	FILM	0.1MF 10%	C538	1-108-680-11	MYLAR	0.001MF 10%
C014	1-137-098-11	FILM	0.1MF 10%	C539	1-163-129-00	CERAMIC CHIP	330PF 5%
C015	1-124-902-00	ELECT	0.47MF 20%	C540	1-163-129-00	CERAMIC CHIP	330PF 5%
C016	1-163-141-00	CERAMIC CHIP	0.001MF 5%	C541	1-124-122-11	ELECT	100MF 20%
C017	1-137-098-11	FILM	0.1MF 10%	C542	1-163-129-00	CERAMIC CHIP	330PF 5%
C018	1-163-127-00	CERAMIC CHIP	270PF 5%	C543	1-161-964-61	CERAMIC CHIP	0.0047MF 250V
C019	1-137-094-11	FILM	0.047MF 10%	C544	1-161-964-61	CERAMIC CHIP	0.0047MF 250V
C021	1-163-117-00	CERAMIC CHIP	100PF 5%	C545	1-125-318-11	ELECT(BLOCK)	220MF 20%
C023	1-163-117-00	CERAMIC CHIP	100PF 5%	C546	1-124-484-11	ELECT	220MF 20%
C024	1-163-117-00	CERAMIC CHIP	100PF 5%	C547	1-163-137-00	CERAMIC CHIP	680PF 5%
C027	1-124-910-11	ELECT	47MF 20%	C548	1-137-028-11	FILM	1MF 10%
C030	1-163-038-00	CERAMIC CHIP	0.1MF 25V	C549	1-124-927-11	ELECT	4.7MF 20%
C031	1-163-081-00	CERAMIC CHIP	0.22MF 25V	C550	1-124-910-11	ELECT	4.7MF 20%
C032	1-163-081-00	CERAMIC CHIP	0.22MF 25V	C551	1-108-680-11	MYLAR	0.001MF 10%
C033	1-163-181-00	CERAMIC CHIP	100PF 5%	C552	1-136-539-11	FILM	0.0022MF 3%
C034	1-124-907-11	ELECT	10MF 20%	C553	1-102-030-00	CERAMIC	330PF 10%
C251	1-124-903-11	ELECT	1MF 20%	C554	1-128-142-11	ELECT	1500MF 20%
C252	1-126-233-11	ELECT	22MF 20%	C555	1-102-030-00	CERAMIC	330PF 10%
C253	1-163-009-11	CERAMIC CHIP	0.001MF 10%	C556	1-124-122-11	ELECT	100MF 20%
C254	1-137-098-11	FILM	0.1MF 10%	C557	1-128-320-11	ELECT	2200MF 20%
C255	1-124-636-00	ELECT	3300MF 20%	C558	1-162-115-00	CERAMIC	330PF 10%
C261	1-124-903-11	ELECT	1MF 20%	C559	1-128-320-11	ELECT	2200MF 20%
C262	1-126-233-11	ELECT	22MF 20%	C560	1-124-910-11	ELECT	47MF 20%
C263	1-163-009-11	CERAMIC CHIP	0.001MF 10%	C561	1-124-122-11	ELECT	100MF 20%
C264	1-137-098-11	FILM	0.1MF 10%	C562	1-136-173-00	FILM	0.47MF 5%
C265	1-124-564-11	ELECT	4700MF 20%	C563	1-124-347-00	ELECT	100MF 20%
C270	1-137-035-11	FILM	0.47MF 10%	C564	1-128-320-11	ELECT	2200MF 20%
C274	1-137-035-11	FILM	0.47MF 10%	C565	1-162-115-00	CERAMIC	330PF 10%
C501	1-124-927-11	ELECT	4.7MF 20%	C566	1-124-927-11	ELECT	1000MF 20%
C502	1-124-927-11	ELECT	4.7MF 20%	C567	1-163-009-11	CERAMIC CHIP	0.001MF 10%
C503	1-137-049-11	FILM	0.015MF 10%	C568	1-124-927-11	ELECT	4.7MF 20%
C504	1-163-121-00	CERAMIC CHIP	150PF 5%	C569	1-124-927-11	ELECT	10MF 20%
C505	1-108-794-11	MYLAR	0.0015MF 5%	C570	1-124-927-11	ELECT	1000MF 20%
C506	1-137-102-11	FILM	0.022MF 10%	C571	1-124-927-11	ELECT	330PF 10%
C507	1-137-033-11	FILM	0.33MF 10%	C572	1-163-009-11	CERAMIC CHIP	0.001MF 10%
C508	1-137-102-11	FILM	0.022MF 10%	C573	1-163-117-00	CERAMIC CHIP	100PF 5%
C509	1-137-098-11	FILM	0.1MF 10%	C574	1-126-105-11	ELECT	1000MF 20%
C510	1-161-959-00	CERAMIC	22PF 10%	C575	1-102-030-00	CERAMIC	330PF 10%
C511	1-108-686-11	MYLAR	0.0033MF 10%	C576	1-123-948-00	ELECT	22MF 20%
C512	1-137-098-11	FILM	0.1MF 10%	C577	1-136-111-00	FILM	1MF 5%
C513	1-163-125-00	CERAMIC CHIP	220PF 5%	C578	1-123-024-21	ELECT	33MF 200V
C514	1-137-028-11	FILM	1MF 10%	C579	1-136-111-00	FILM	1MF 5%
C515	1-124-903-11	ELECT	1MF 20%	C580	1-162-114-00	CERAMIC	0.0047MF 2KV
C516	1-108-680-11	MYLAR	0.001MF 10%	C581	1-137-098-11	FILM	0.1MF 10%
C517	1-124-252-00	ELECT	0.33MF 20%	C582	1-106-395-00	MYLAR	0.15MF 10%
C518	1-124-902-00	ELECT	0.47MF 20%	C583	1-123-024-21	ELECT	33MF 160V
				C584	1-161-731-51	CERAMIC	0.001MF 10%
				C585	1-136-111-00	FILM	1MF 5%
				C586	1-136-549-11	FILM	0.0106MF 3% 1.4KV
				C587	1-124-634-11	ELECT	1MF 20%
				C588	1-102-212-00	CERAMIC	820PF 10% 500V
				C589	1-161-731-51	CERAMIC	0.001MF 10% 2KV
				C590	1-136-111-00	FILM	1MF 5% 200V
				C591	1-124-634-11	ELECT	1MF 20% 250V
				C592	1-124-634-11	ELECT	1MF 10% 500V
				C593	1-124-634-11	ELECT	1MF 10% 2KV
				C594	1-124-634-11	ELECT	1MF 10% 2KV
				C595	1-124-634-11	ELECT	1MF 10% 2KV
				C596	1-124-634-11	ELECT	1MF 10% 2KV
				C597	1-124-634-11	ELECT	1MF 10% 2KV
				C598	1-124-634-11	ELECT	1MF 10% 2KV
				C599	1-124-634-11	ELECT	1MF 10% 2KV
				C600	1-124-634-11	ELECT	1MF 10% 2KV
				C601	1-124-634-11	ELECT	1MF 10% 2KV
				C602	1-124-634-11	ELECT	1MF 10% 2KV
				C603	1-124-634-11	ELECT	1MF 10% 2KV
				C604	1-124-634-11	ELECT	1MF 10% 2KV
				C605	1-124-634-11	ELECT	1MF 10% 2KV
				C606	1-124-634-11	ELECT	1MF 10% 2KV
				C607	1-124-634-11	ELECT	1MF 10% 2KV
				C608	1-124-634-11	ELECT	1MF 10% 2KV
				C609	1-124-634-11	ELECT	1MF 10% 2KV
				C610	1-124-634-11	ELECT	1MF 10% 2KV
				C611	1-124-634-11	ELECT	1MF 10% 2KV
				C612	1-124-634-11	ELECT	1MF 10% 2KV
				C613	1-124-634-11	ELECT	1MF 10% 2KV
				C614	1-124-634-11	ELECT	1MF 10% 2KV
				C615	1-124-634-11	ELECT	1MF 10% 2KV
				C616	1-124-634-11	ELECT	1MF 10% 2KV
				C617	1-124-634-11	ELECT	1MF 10% 2KV
				C618	1-124-634-11	ELECT	1MF 10% 2KV
				C619	1-124-634-11	ELECT	1MF 10% 2KV
				C620	1-124-634-11	ELECT	1MF 10% 2KV
				C621	1-124-634-11	ELECT	1MF 10% 2KV
				C622	1-124-634-11	ELECT	1MF 10% 2KV
				C623	1-124-634-11	ELECT	1MF 10% 2KV
				C624	1-124-634-11	ELECT	1MF 10% 2KV
				C625	1-124-634-11	ELECT	1MF 10% 2KV
				C626	1-124-634-11	ELECT	1MF 10% 2KV
				C627	1-124-634-11	ELECT	1MF 10% 2KV
				C628	1-124-634-11	ELECT	1MF 10% 2KV
				C629	1-124-634-11	ELECT	1MF 10% 2KV
				C630	1-124-634-11	ELECT	1MF 10% 2KV
				C631	1-124-634-11	ELECT	1MF 10% 2KV
				C632	1-124-634-11	ELECT	1MF 10% 2KV
				C633	1-124-634-11	ELECT	1MF 10% 2KV
				C634	1-124-634-11	ELECT	1MF 10% 2KV
				C635	1-124-634-11	ELECT	1MF 10% 2KV
				C636	1-124-634-11	ELECT	1MF 10% 2KV
				C637	1-124-634-11	ELECT	1MF 10% 2KV
				C638	1-124-634-11	ELECT	1MF 10% 2KV
				C639	1-124-634-11	ELECT	1MF 10% 2KV
				C640	1-124-634-11	ELECT	1MF 10% 2KV
				C641	1-124-634-11	ELECT	1MF 10% 2KV
				C642	1-124-634-11	ELECT	1MF 10% 2KV
				C643	1-124-634-11	ELECT	1MF 10% 2KV
				C644	1-124-634-11	ELECT	1MF 10% 2KV
				C645	1-124-634-11	ELECT	1MF 10% 2KV
				C646	1-124-634-11	ELECT	1MF 10% 2KV
				C647	1-124-634-11	ELECT	1MF 10% 2KV
				C648	1-124-634-11	ELECT	1MF 10% 2KV
				C649	1-124-634-11	ELECT	1MF 10% 2KV
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				C651	1-124-634-11	ELECT	1MF 10% 2KV
				C652	1-124-634-11	ELECT	1MF 10% 2KV
				C653	1-124-634-11	ELECT	1MF 10% 2KV
				C654	1-124-634-11	ELECT	1MF 10% 2KV
				C655	1-124-634-11	ELECT	1MF 10% 2KV
				C656	1-124-634-11	ELECT	1MF 10% 2KV
				C657	1-124-634-11	ELECT	1MF 10% 2KV
				C658	1-124-634		

**D**

The components identified by shading and mark **Δ** are critical for safety.  
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C820	1-137-046-11	FILM	0.0082MF	10%	400V	D601 Δ 8-719-510-63	DIODE D4SB60L-F
C821 Δ	1-162-116-51	CERAMIC	680PF	10%	2KV	D602 8-719-300-33	DIODE RU-3AM
C822	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	D603 8-719-911-55	DIODE U05G
C823	1-137-043-11	FILM	0.0047MF	10%	400V	D604 8-719-911-55	DIODE U05G
C824	1-102-212-00	CERAMIC	820PF	10%	500V	D605 8-719-911-55	DIODE U05G
C825	1-137-102-11	FILM	0.022MF	10%	250V	D606 8-719-300-33	DIODE RU-3AM
C1601 Δ	1-136-518-11	FILM	0.33MF	20%	300V	D607 8-719-300-33	DIODE RU-3AM
C1602 Δ	1-136-519-11	FILM	0.47MF	20%	300V	D608 8-719-300-33	DIODE RU-3AM
C1603 Δ	1-164-246-51	CERAMIC	0.0022MF	20%	400V	D609 8-719-929-71	DIODE HZS33NB1
C1605 Δ	1-164-246-51	CERAMIC	0.0022MF	20%	400V	D610 8-719-300-59	DIODE CTU-12S
C1607 Δ	1-161-964-61	CERAMIC	0.0047MF	10%	250V	D611 8-719-900-26	DIODE ERD29-08J
		<FILTER>			D612 8-719-300-59	DIODE CTU-12S	
CF001	1-577-364-11	VIBRATOR, CERAMIC			D613 8-719-979-85	DIODE EGP20G	
CF501	1-567-888-11	OSCILLATOR, CERAMIC			D614 8-719-979-85	DIODE EGP20G	
		<CONNECTOR>			D616 8-719-120-78	DIODE RD6.2ES-L3	
D1	*1-568-881-51	PIN, CONNECTOR 6P			D617 8-719-911-19	DIODE ISS119	
D2	*1-568-882-51	PIN, CONNECTOR 7P			D618 8-719-109-89	DIODE RD5.6ES-B2	
D11	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D619 8-719-929-71	DIODE HZS33NB1	
D12	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D620 8-719-800-76	DIODE ISS226	
D18	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)			D621 8-719-929-71	DIODE HZS33NB1	
D21	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D622 8-719-911-19	DIODE ISS119	
D22	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D623 8-719-911-19	DIODE ISS119	
D31	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D624 8-719-911-19	DIODE ISS119	
D32	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D630 8-719-110-39	DIODE RD15ES-B1	
D33	*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			D801 8-719-300-33	DIODE RU-3AM	
D41	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)			D802 8-719-300-33	DIODE RU-3AM	
D44	*1-568-881-51	PIN, CONNECTOR 6P			D803 8-719-976-64	DIODE RGP02-17	
D45	*1-568-881-51	PIN, CONNECTOR 6P			D804 8-719-911-55	DIODE U05G	
D51	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)			D805 8-719-911-55	DIODE U05G	
D62	*1-565-395-11	PIN, CONNECTOR 3P			D806 8-719-945-80	DIODE ERC06-15S	
D65	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			D808 8-719-928-08	DIODE ERD28-08S	
D66	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P					
D82	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P					
D83	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P					
D84	*1-580-798-11	CONNECTOR PIN (DY) 6P					
D801	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P					
		<DIODE>					
D001	8-719-929-03	DIODE HZS6.8NB3					
D002	8-719-929-03	DIODE HZS6.8NB3					
D003	8-719-911-19	DIODE ISS119					
D005	8-719-109-89	DIODE RD5.6ES-B2					
D006	8-719-929-71	DIODE HZS33NB1					
D007	8-719-982-08	DIODE MTZJ-3.9B					
D009	8-719-109-89	DIODE RD5.6ES-B2					
D010	8-719-120-78	DIODE RD6.2ES-L3					
D011	8-719-120-78	DIODE RD6.2ES-L3					
D012	8-719-911-19	DIODE ISS119					
D013	8-719-929-03	DIODE HZS6.8NB3					
D271	8-719-110-36	DIODE RD13ES-B2					
D272	8-719-911-19	DIODE ISS119					
D501	8-719-911-19	DIODE ISS119					
D504	8-719-911-55	DIODE U05G					
D506	8-719-800-76	DIODE ISS226					
D508	8-719-911-19	DIODE ISS119					
D511	8-719-911-55	DIODE U05G					
D512	8-719-911-55	DIODE U05G					
D513	8-719-928-85	DIODE HZS4.7NB2					
		<COIL>					
L501	1-408-225-00	INDUCTOR	3.3UH				
L601	1-420-872-00	COIL, AIR CORE					
L602	1-410-396-41	FERRITE BEAD INDUCTOR					
L603	1-410-396-41	FERRITE BEAD INDUCTOR					
L604	1-410-671-31	INDUCTOR	47UH				
L605	1-459-585-11	COIL (WITH CORE) (DRUM TYPE)					
L606	1-412-529-11	INDUCTOR	22UH				
L607	1-410-671-31	INDUCTOR	47UH				
L803	1-459-104-00	COIL, WITH CORE					
L804	1-408-239-00	INDUCTOR	4.7MMH				
L805	1-459-652-12	HLC					
L806	1-459-115-00	COIL, DCC-H					
L809	1-420-872-00	COIL, AIR CORE					
L810	1-459-390-00	COIL (WITH CORE)					

The components identified by shading and mark **△** are critical for safety.  
Replace only with part number specified.

**D**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
<b>&lt;TRANSFORMER&gt;</b>							
LF1601△ 1-421-866-12	LFT			R012	1-216-073-00	METAL GLAZE	10K 5% 1/10W
LF1602△ 1-421-776-21	LFT			R013	1-216-073-00	METAL GLAZE	10K 5% 1/10W
LF1603△ 1-421-862-11	LFT			R014	1-216-085-00	METAL GLAZE	33K 5% 1/10W
T601 △ 1-450-038-11	S.R.T			R015	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
T602 △ 1-424-277-11	TRANSFORMER, TRIGGER PULSE			R016	1-216-085-00	METAL GLAZE	33K 5% 1/10W
T801 1-437-090-00	HDT			R017	1-216-748-11	METAL GLAZE	39K 5% 1/10W
T802 △ 1-439-416-51	TRANSFORMER ASSY, FLYBACK (UX-1650)			R018	1-216-095-00	METAL GLAZE	82K 5% 1/10W
<b>&lt;IC LINK&gt;</b>							
PS601△ 1-532-984-91	LINK, IC (ICP-N50) 2A			R024	1-216-073-00	METAL GLAZE	10K 5% 1/10W
PS602△ 1-532-984-91	LINK, IC (ICP-N50) 2A			R025	1-216-073-00	METAL GLAZE	10K 5% 1/10W
PS603△ 1-532-679-91	LINK, IC (ICP-N15) 0.6A			R026	1-216-182-00	METAL GLAZE	220 5% 1/8W
PS604△ 1-532-984-91	LINK, IC (ICP-N50) 2A			R027	1-216-025-00	METAL GLAZE	100 5% 1/10W
<b>&lt;TRANSISTOR&gt;</b>							
Q001 8-729-901-01	TRANSISTOR DTC144EK			R029	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q002 8-729-901-01	TRANSISTOR DTC144EK			R030	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q003 8-729-216-22	TRANSISTOR 2SA1162-G			R031	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q004 8-729-216-22	TRANSISTOR 2SA1162-G			R032	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q005 8-729-901-01	TRANSISTOR DTC144EK			R033	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q006 8-729-901-01	TRANSISTOR DTC144EK			R034	1-216-077-00	METAL GLAZE	15K 5% 1/10W
Q007 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R035	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q008 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R036	1-216-083-00	METAL GLAZE	27K 5% 1/10W
Q009 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R037	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
Q010 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R038	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
Q251 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R039	1-216-081-00	METAL GLAZE	22K 5% 1/10W
Q261 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R040	1-216-077-00	METAL GLAZE	15K 5% 1/10W
Q271 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R041	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q502 8-729-216-22	TRANSISTOR 2SA1162-G			R042	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q505 8-729-140-96	TRANSISTOR 2SD774-34			R043	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q506 8-729-140-97	TRANSISTOR 2SB734-34			R044	1-216-097-00	METAL GLAZE	100K 5% 1/10W
Q507 8-729-216-22	TRANSISTOR 2SA1162-G			R045	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
Q598 8-729-216-22	TRANSISTOR 2SA1162-G			R046	1-216-095-00	METAL GLAZE	82K 5% 1/10W
Q601 8-729-122-03	TRANSISTOR 2SA1220A-P			R047	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q602 8-729-209-02	TRANSISTOR 2SD1548-LB			R048	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q603 8-729-122-03	TRANSISTOR 2SA1220A-P			R049	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q604 8-729-216-22	TRANSISTOR 2SA1162-G			R050	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
Q605 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R051	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q606 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R052	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q607 8-729-920-92	TRANSISTOR 2SD2096-EF			R053	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q608 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R054	1-216-049-00	METAL GLAZE	1K 5% 1/10W
Q609 8-729-320-62	TRANSISTOR 2SD789-34			R055	1-216-037-00	METAL GLAZE	330 5% 1/10W
Q801 8-729-120-28	TRANSISTOR 2SC1623-L5L6			R056	1-216-073-00	METAL GLAZE	10K 5% 1/10W
Q804 8-729-304-50	TRANSISTOR 2SD1941-06			R057	1-216-025-00	METAL GLAZE	100 5% 1/10W
Q805 8-729-119-80	TRANSISTOR 2SC2688-LK			R058	1-216-049-00	METAL GLAZE	1K 5% 1/10W
<b>&lt;RESISTOR&gt;</b>							
JR1 1-216-296-00	METAL GLAZE 0 5%	1/8W		R059	1-216-049-00	METAL GLAZE	1K 5% 1/10W
JR3 1-216-296-00	METAL GLAZE 0 5%	1/8W		R060	1-216-049-00	METAL GLAZE	1K 5% 1/10W
JR4 1-216-295-00	METAL GLAZE 0 5%	1/10W		R061	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JR7 1-216-296-00	METAL GLAZE 0 5%	1/8W		R062	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R001 1-216-041-00	METAL GLAZE 470 5%	1/10W		R063	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R002 1-216-041-00	METAL GLAZE 470 5%	1/10W		R064	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R003 1-216-198-00	METAL GLAZE 1K 5%	1/8W		R065	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R004 1-216-049-00	METAL GLAZE 1K 5%	1/10W		R066	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R005 1-216-081-00	METAL GLAZE 22K 5%	1/10W		R067	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R006 1-216-073-00	METAL GLAZE 10K 5%	1/10W		R068	1-216-174-00	METAL GLAZE	100 5% 1/8W
R007 1-216-065-00	METAL GLAZE 4.7K 5%	1/10W		R069	1-216-174-00	METAL GLAZE	100 5% 1/8W
R008 1-216-073-00	METAL GLAZE 10K 5%	1/10W		R070	1-216-198-00	METAL GLAZE	1K 5% 1/8W
R009 1-216-073-00	METAL GLAZE 10K 5%	1/10W		R071	1-216-198-00	METAL GLAZE	1K 5% 1/8W
R010 1-216-041-00	METAL GLAZE 470 5%	1/10W		R072	1-216-222-00	METAL GLAZE	10K 5% 1/8W
				R073	1-216-073-00	METAL GLAZE	10K 5% 1/10W
				R074	1-216-041-00	METAL GLAZE	470 5% 1/10W
				R075	1-216-041-00	METAL GLAZE	470 5% 1/10W
				R076	1-216-073-00	METAL GLAZE	10K 5% 1/10W

**D**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R078	1-216-198-00	METAL GLAZE	1K 5% 1/8W	R534	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R079	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R535	1-249-753-15	CARBON	4.7M 5% 1/4W
R080	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R536	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R081	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R537	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R083	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R538	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R084	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R539	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R085	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R540	1-216-013-00	METAL GLAZE	33 5% 1/10W
R086	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R541	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R087	1-216-035-00	METAL GLAZE	270 5% 1/10W	R542	1-216-308-00	METAL GLAZE	4.7 5% 1/10W
R088	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R543	1-249-451-11	CARBON	2.2 5% 1/4W
R093	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R544	1-247-745-11	CARBON	330 5% 1/2W
R094	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R545	1-216-748-11	METAL GLAZE	39K 5% 1/10W
R095	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R546	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R096	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R547	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R098	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R548	1-216-350-11	METAL OXIDE	1.2 5% 1W F
R251	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R549	1-215-890-11	METAL OXIDE	470 5% 2W F
R252	1-216-039-00	METAL GLAZE	390 5% 1/10W	R550	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R253	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R551	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R254	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R552	1-216-433-00	METAL OXIDE	1.2K 5% 1W
R255	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R553	1-215-869-11	METAL OXIDE	1K 5% 1W
R256	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R554	1-216-037-00	METAL GLAZE	330 5% 1/10W
R257	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R555	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R258	1-215-869-11	METAL OXIDE	1K 5% 1W F	R556	1-216-025-00	METAL GLAZE	100 5% 1/10W
R259	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R557	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R261	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R558	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R262	1-216-039-00	METAL GLAZE	390 5% 1/10W	R559	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R263	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R560	1-216-037-00	METAL GLAZE	330 5% 1/10W
R264	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R591	1-216-047-00	METAL GLAZE	820 5% 1/10W
R265	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R592	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R266	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R593	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R267	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R594	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R268	1-215-869-11	METAL OXIDE	1K 5% 1W F	R597	1-216-041-00	METAL GLAZE	470 5% 1/10W
R269	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R598	1-215-900-11	METAL OXIDE	22K 5% 2W F
R270	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R601	1-216-353-00	METAL OXIDE	2.2 5% 1W
R271	1-216-045-00	METAL GLAZE	680 5% 1/10W	R603	1-215-906-11	METAL OXIDE	15 5% 3W F
R272	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R604	1-216-025-00	METAL GLAZE	100 5% 1/10W
R273	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R605	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R274	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R606	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R500	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R607	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R501	1-216-041-00	METAL GLAZE	470 5% 1/10W	R608	1-216-488-11	METAL OXIDE	18K 5% 3W F
R502	1-216-033-00	METAL GLAZE	220 5% 1/10W	R609	1-216-007-00	METAL GLAZE	18 5% 1/10W
R503	1-216-035-00	METAL GLAZE	270 5% 1/10W	R610	1-244-941-00	CARBON	680K 5% 1/2W
R504	1-249-420-11	CARBON	1.8K 5% 1/4W	R611	1-216-015-00	METAL GLAZE	39 5% 1/10W
R505	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R612	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R506	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R613	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R509	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R614	1-205-758-11	WIREWOUND	100 10% 10W F
R510	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R616	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R514	1-216-033-00	METAL GLAZE	220 5% 1/10W	R617	1-216-037-00	METAL GLAZE	330 5% 1/10W
R515	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R618	1-216-431-11	METAL OXIDE	560 5% 1W F
R517	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R619	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R518	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R620	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R519	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R621	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R520	1-216-037-00	METAL GLAZE	330 5% 1/10W	R622	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R521	1-216-025-00	METAL GLAZE	100 5% 1/10W	R623	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R522	1-215-469-00	METAL	100K 1% 1/4W	R624	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R523	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R625	1-215-865-11	METAL OXIDE	220 5% 1W F
R524	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R626	1-216-037-00	METAL GLAZE	330 5% 1/10W
R525	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R628	1-216-001-00	METAL GLAZE	10 5% 1/10W
R526	1-249-409-11	CARBON	220 5% 1/4W F	R629	1-216-037-00	METAL GLAZE	330 5% 1/10W
R527	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R631	1-216-465-11	METAL OXIDE	27K 5% 2W
R528	1-216-031-00	METAL GLAZE	180 5% 1/10W	R633	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R529	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R634	1-216-430-11	METAL OXIDE	390 5% 1W F
R530	1-249-448-11	CARBON	1.2 5% 1/4W F	R635	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R533	1-216-031-00	METAL GLAZE	180 5% 1/10W				

The components identified by shading and mark  $\Delta$  are critical for safety.  
Replace only with part number specified.

D V

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R636	1-216-073-00	METAL GLAZE	10K 5% 1/10W	C14	1-124-927-11	ELECT	4.7MF 20% 50V
R643	1-217-190-21	WIREWOUND	0.15 5% 1/10W F	C15	1-124-927-11	ELECT	4.7MF 20% 50V
R651	1-216-025-00	METAL GLAZE	100 5% 1/10W	C16	1-163-141-00	CERAMIC CHIP	0.001MF 5% 50V
R653	1-205-758-11	WIREWOUND	100 10% 10W F	C17	1-163-141-00	CERAMIC CHIP	0.001MF 5% 50V
R802	1-249-443-11	CARBON	0.47 5% 1/4W F	C18	1-163-141-00	CERAMIC CHIP	0.001MF 5% 50V
R805	1-249-448-11	CARBON	1.2 5% 1/4W F	C26	1-163-038-00	CERAMIC CHIP	0.1MF 25V
R806	1-216-093-00	METAL GLAZE	68K 5% 1/10W	C27	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R807	1-215-869-11	METAL OXIDE	1K 5% 1W F	C28	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R809	1-202-821-11	SOLID	1.8K 10% 1/2W	C29	1-163-117-00	CERAMIC CHIP	100PF 5% 50V
R810	1-202-818-00	SOLID	1K 10% 1/2W	C32	1-163-038-00	CERAMIC CHIP	0.1MF 25V
R811	1-215-863-11	METAL OXIDE	100 5% 1W	C33	1-163-038-00	CERAMIC CHIP	0.1MF 25V
R812	1-247-285-00	CARBON	75K 5% 1/2W				
R815	1-215-884-11	METAL OXIDE	47 5% 2W F				
R816	1-215-868-00	METAL OXIDE	680 5% 1W F				
R817	1-216-049-00	METAL GLAZE	1K 5% 1/10W				
						<CONNECTOR>	
R820	1-249-403-11	CARBON	68 5% 1/4W F	CNV1	*1-565-393-11	CONNECTOR, BOARD TO BOARD	
R821	1-247-725-11	CARBON	10K 5% 1/4W F	CNV2	*1-565-393-11	CONNECTOR, BOARD TO BOARD	
R822	1-217-778-11	FUSIBLE	1K 5% 1W F				
R825	1-216-349-00	METAL OXIDE	1 5% 1W F				
R826	1-216-097-00	METAL GLAZE	100K 5% 1/10W			<DIODE>	
R827	1-216-073-00	METAL GLAZE	10K 5% 1/10W	D1	8-719-105-91	DIODE RD5.6M-B2	
R828	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	D3	8-719-104-34	DIODE 1S2836	
R829	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W	D4	8-719-400-18	DIODE MA152WK	
R831	1-249-451-11	CARBON	2.2 5% 1/4W	D5	8-719-104-34	DIODE 1S2836	
R1601 $\Delta$	1-246-513-75	CARBON	47K 5% 1/4W	D6	8-719-400-18	DIODE MA152WK	
R1602 $\Delta$	1-244-945-91	CARBON	1M 5% 1/2W	D7	8-719-105-52	DIODE RD3.6M-B2	
R1603 $\Delta$	1-217-328-11	WIREWOUND	2.7 10% 7W F	D9	8-719-106-17	DIODE RD6.8M-B2	
R1604 $\Delta$	1-246-513-75	CARBON	47K 5% 1/4W				
R1605 $\Delta$	1-218-265-91	METAL GLAZE	8.2M 5% 1W				
R5501	1-216-073-00	METAL GLAZE	10K 5% 1/10W			<IC>	
R5503	1-216-308-00	METAL GLAZE	4.7 5% 1/10W	IC1	8-759-039-18	IC SDA20162-B002	
R5504	1-216-121-00	METAL GLAZE	1M 5% 1/10W	IC2	8-759-045-54	IC SAA5246P/E/M4A	
R5505	1-216-001-00	METAL GLAZE	10 5% 1/10W	IC3	8-759-510-49	IC FCB61C65L-70P	
		<VARIABLE RESISTOR>				<COIL>	
RV501	1-238-013-11	RES, ADJ, CARBON	2.2K	L1	1-408-403-00	INDUCTOR	3.3UH
RV502	1-238-016-11	RES, ADJ, CARBON	10K	L2	1-408-407-00	INDUCTOR	6.8UH
RV601	1-238-011-11	RES, ADJ, CARBON	470	L3	1-408-407-00	INDUCTOR	6.8UH
				L4	1-408-407-00	INDUCTOR	6.8UH
		<SPARK GAP>					
SG801	1-519-422-11	GAP, SPARK					
		<THERMISTOR>					
						<TRANSISTOR>	
THP601 $\Delta$	1-808-059-32	THERMISTOR, POSITIVE		Q1	8-729-900-53	TRANSISTOR DTC114EK	
				Q2	8-729-920-92	TRANSISTOR 2SD2096-EF	
				Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
				Q5	8-729-807-87	TRANSISTOR 2SB1295-UL6	
				Q6	8-729-807-87	TRANSISTOR 2SB1295-UL6	
				Q7	8-729-807-87	TRANSISTOR 2SB1295-UL6	
				Q8	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
		<CAPACITOR>					
C1	1-126-101-11	ELECT	100MF	20%	16V		
C2	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C3	1-124-120-11	ELECT	220MF	20%	16V		
C4	1-163-077-00	CERAMIC CHIP	0.1MF		50V		
C5	1-124-120-11	ELECT	220MF	20%	16V		
						<RESISTOR>	
C6	1-163-038-00	CERAMIC CHIP	0.1MF		25V	JR01	1-216-295-00 METAL GLAZE 0 5% 1/10V
C10	1-163-038-00	CERAMIC CHIP	0.1MF		25V	JR02	1-216-295-00 METAL GLAZE 0 5% 1/10V
C11	1-163-038-00	CERAMIC CHIP	0.1MF		25V	JR03	1-216-295-00 METAL GLAZE 0 5% 1/10V
C12	1-163-038-00	CERAMIC CHIP	0.1MF		25V	JR08	1-216-295-00 METAL GLAZE 0 5% 1/10V
C13	1-163-038-00	CERAMIC CHIP	0.1MF		25V	JR09	1-216-295-00 METAL GLAZE 0 5% 1/10V
						JR11	1-216-295-00 METAL GLAZE 0 5% 1/10V

**V** **H1** **H2**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
JR14	1-216-296-00	METAL GLAZE	0 5% 1/8W	X1	1-579-266-31	CRYSTAL VIBRATOR	
JR17	1-216-295-00	METAL GLAZE	0 5% 1/10W	X2	1-577-364-11	VIBRATOR, CERAMIC	
JR18	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR19	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR20	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR21	1-216-296-00	METAL GLAZE	0 5% 1/8W		*1-638-744-11	H1 BOARD	*****
JR23	1-216-295-00	METAL GLAZE	0 5% 1/10W				*****
JR24	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR25	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR26	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR201	1-216-295-00	METAL GLAZE	0 5% 1/10W	C1651	1-102-106-00	CERAMIC	100PF 10% 50V
JR204	1-216-295-00	METAL GLAZE	0 5% 1/10W	C1652	1-102-106-00	CERAMIC	100PF 10% 50V
JR207	1-216-295-00	METAL GLAZE	0 5% 1/10W	C1653	1-102-074-00	CERAMIC	0.001MF 10% 50V
JR208	1-216-295-00	METAL GLAZE	0 5% 1/10W	C1655	1-102-074-00	CERAMIC	0.001MF 10% 50V
JR211	1-216-295-00	METAL GLAZE	0 5% 1/10W				*****
JR213	1-216-295-00	METAL GLAZE	0 5% 1/10W				*****
JR219	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
JR220	1-216-295-00	METAL GLAZE	0 5% 1/10W	H1-1	*1-568-881-51	PIN, CONNECTOR 6P	
JR223	1-216-295-00	METAL GLAZE	0 5% 1/10W	H1-2	*1-568-678-11	TERMINAL BLOCK, S 3P	
R1	1-218-326-11	METAL GLAZE	470 5% 1/2W	H1-4	*1-568-879-51	PIN, CONNECTOR 4P	
R3	1-216-049-00	METAL GLAZE	1K 5% 1/10W	H1-05	*1-562-837-11	JACK	
R4	1-216-025-00	METAL GLAZE	100 5% 1/10W	H1-23	*1-568-879-51	PIN, CONNECTOR 4P	
R5	1-216-047-00	METAL GLAZE	820 5% 1/10W	H1-43	*1-564-512-11	PLUG, CONNECTOR 9P	
R6	1-216-001-00	METAL GLAZE	10 5% 1/10W				*****
R7	1-216-083-00	METAL GLAZE	27K 5% 1/10W				*****
R8	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W				*****
R9	1-216-308-00	METAL GLAZE	4.7 5% 1/10W	R1651	1-249-413-11	CARBON	470 5% 1/4W
R02	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W	R1652	1-249-413-11	CARBON	470 5% 1/4W
R10	1-218-325-11	METAL GLAZE	120 5% 1/4W				*****
R11	1-218-325-11	METAL GLAZE	120 5% 1/4W				*****
R12	1-218-325-11	METAL GLAZE	120 5% 1/4W				*****
R13	1-216-025-00	METAL GLAZE	100 5% 1/10W	S1651	1-571-532-21	SWITCH, TACTIL	
R14	1-216-001-00	METAL GLAZE	10 5% 1/10W	S1652	1-571-532-21	SWITCH, TACTIL	
R15	1-216-013-00	METAL GLAZE	33 5% 1/10W	S1653	1-571-532-21	SWITCH, TACTIL	
R16	1-216-013-00	METAL GLAZE	33 5% 1/10W				*****
R17	1-216-013-00	METAL GLAZE	33 5% 1/10W				*****
R18	1-216-025-00	METAL GLAZE	100 5% 1/10W				*****
R19	1-216-025-00	METAL GLAZE	100 5% 1/10W				*****
R20	1-216-041-00	METAL GLAZE	470 5% 1/10W				*****
R21	1-216-041-00	METAL GLAZE	470 5% 1/10W				*****
R22	1-216-168-00	METAL GLAZE	56 5% 1/8W				*****
R23	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W				*****
R24	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W	D1651	8-719-948-31	DIODE LD-201VR	
R25	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				*****
R26	1-216-049-00	METAL GLAZE	1K 5% 1/10W				*****
R27	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W	D1652	8-719-948-31	DIODE LD-201VR	
R28	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W				*****
R34	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	D1654	8-719-948-31	DIODE LD-201VR	
R35	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				*****
R40	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				*****
R41	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				*****
R42	1-216-049-00	METAL GLAZE	1K 5% 1/10W				*****
R44	1-216-295-00	METAL GLAZE	0 5% 1/10W				*****
R46	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	H2-2	*1-568-882-51	PIN, CONNECTOR 7P	
R47	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				*****
R49	1-216-049-00	METAL GLAZE	1K 5% 1/10W				*****
R50	1-216-296-00	METAL GLAZE	0 5% 1/8W				*****
<VARIABLE RESISTOR>							
RV1	1-238-012-11	RES, ADJ, CARBON 1K					
<CRYSTAL>							
<RESISTOR>							
				R1662	1-249-413-11	CARBON	470 5% 1/4W
*****							
IC1651 8-741-101-75 IC SBX1610-11							

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
*A-1651-023-A	J1 BOARD, COMPLETE			C1429	1-163-029-11	CERAMIC CHIP 0.0047MF	50V
	*****	*****		C1430	1-163-003-11	CERAMIC CHIP 330PF	50V
		<CAPACITOR>		C1431	1-126-529-11	ELECT 0.47MF	20%
C203	1-124-925-11	ELECT 2.2MF	20% 50V	C1432	1-124-902-00	ELECT 0.47MF	20% 50V
C205	1-124-927-11	ELECT 4.7MF	20% 50V	C1433	1-124-122-11	ELECT 100MF	20% 50V
C206	1-124-925-11	ELECT 2.2MF	20% 50V	C1436	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C207	1-124-927-11	ELECT 4.7MF	20% 50V	C1437	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C213	1-126-233-11	ELECT 22MF	20% 50V	C1438	1-137-047-11	FILM 0.01MF	10% 400V
C214	1-137-045-11	FILM 0.0068MF	10% 400V	C1439	1-137-047-11	FILM 0.01MF	10% 400V
C217	1-137-045-11	FILM 0.0068MF	10% 400V	C1440	1-124-907-11	ELECT 10MF	20% 50V
C218	1-137-102-11	FILM 0.022MF	10% 250V	C1441	1-124-907-11	ELECT 10MF	20% 50V
C219	1-137-102-11	FILM 0.022MF	10% 250V	C1442	1-137-098-11	FILM 0.1MF	10% 100V
C220	1-108-686-11	MYLAR 0.0033MF	10% 100V	C1443	1-137-098-11	FILM 0.1MF	10% 100V
C221	1-108-686-11	MYLAR 0.0033MF	10% 100V	C1444	1-124-910-11	ELECT 47MF	20% 50V
C222	1-137-095-11	FILM 0.056MF	10% 100V	C1445	1-102-824-00	CERAMIC 470PF	5% 50V
C223	1-137-095-11	FILM 0.056MF	10% 100V	C1446	1-102-824-00	CERAMIC 470PF	5% 50V
C224	1-137-047-11	FILM 0.01MF	10% 400V	C1501	1-124-927-11	ELECT 4.7MF	20% 50V
C225	1-136-173-00	FILM 0.47MF	5% 50V	C1502	1-124-903-11	ELECT 1MF	20% 50V
C226	1-136-173-00	FILM 0.47MF	5% 50V	C1503	1-108-680-11	MYLAR 0.001MF	10% 100V
C227	1-137-102-11	FILM 0.022MF	10% 250V	C1504	1-124-910-11	ELECT 47MF	20% 50V
C228	1-137-104-11	FILM 0.033MF	10% 250V	C1505	1-137-094-11	FILM 0.047MF	10% 100V
C229	1-137-049-11	FILM 0.015MF	10% 400V	C1507	1-108-686-11	MYLAR 0.0033MF	10% 100V
C230	1-137-049-11	FILM 0.015MF	10% 400V	C1508	1-124-903-11	ELECT 1MF	20% 50V
C231	1-124-902-00	ELECT 0.47MF	20% 50V	C1509	1-124-903-11	ELECT 1MF	20% 50V
C232	1-124-907-11	ELECT 10MF	20% 50V	C1511	1-124-927-11	ELECT 4.7MF	20% 50V
C233	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1512	1-137-045-11	FILM 0.0068MF	10% 400V
C234	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1513	1-163-105-00	CERAMIC CHIP 33PF	5% 250V
C235	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1514	1-137-102-11	FILM 0.022MF	10% 250V
C236	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	C1515	1-102-117-00	CERAMIC 820PF	10% 50V
C237	1-124-902-00	ELECT 0.47MF	20% 50V			<CONNECTOR>	
C238	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	CN1401	1-565-838-11	JACK BLOCK, PIN 2P	
C239	1-126-103-11	ELECT 470MF	20% 16V	J1-41	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P	
C240	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V	J1-43	*1-564-524-11	PLUG, CONNECTOR 9P	
C241	1-163-018-00	CERAMIC CHIP 0.0056MF	10% 50V	J1-44	*1-564-527-11	PLUG, CONNECTOR 12P	
C242	1-163-033-00	CERAMIC CHIP 0.022MF	50V	J1-51	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P	
C243	1-163-033-00	CERAMIC CHIP 0.022MF	50V			<DIODE>	
C244	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D201	8-719-110-14	DIODE RD9.1ES-B3	
C245	1-163-033-00	CERAMIC CHIP 0.022MF	50V	D202	8-719-110-14	DIODE RD9.1ES-B3	
C1401	1-124-907-11	ELECT 10MF	20% 50V	D205	8-719-110-03	DIODE RD7.5ES-B2	
C1402	1-126-103-11	ELECT 470MF	20% 16V	D206	8-719-110-03	DIODE RD7.5ES-B2	
C1403	1-163-003-11	CERAMIC CHIP 330PF	10% 50V	D1401	8-719-110-03	DIODE RD7.5ES-B2	
C1404	1-137-098-11	FILM 0.1MF	10% 100V	D1403	8-719-110-03	DIODE RD7.5ES-B2	
C1405	1-163-029-11	CERAMIC CHIP 0.0047MF	50V	D1404	8-719-110-03	DIODE RD7.5ES-B2	
C1406	1-137-098-11	FILM 0.1MF	10% 100V	D1405	8-719-110-03	DIODE RD7.5ES-B2	
C1407	1-124-910-11	ELECT 47MF	20% 50V	D1406	8-719-110-03	DIODE RD7.5ES-B2	
C1408	1-124-122-11	ELECT 100MF	20% 50V	D1407	8-719-921-77	DIODE MTZN-10C	
C1409	1-126-233-11	ELECT 22MF	20% 50V	D1408	8-719-110-14	DIODE RD9.1ES-B3	
C1410	1-124-907-11	ELECT 10MF	20% 50V	D1409	8-719-110-14	DIODE RD9.1ES-B3	
C1411	1-124-907-11	ELECT 10MF	20% 50V	D1410	8-719-110-14	DIODE RD9.1ES-B3	
C1412	1-124-910-11	ELECT 47MF	20% 50V	D1415	8-719-110-03	DIODE RD7.5ES-B2	
C1413	1-124-910-11	ELECT 47MF	20% 50V	D1418	8-719-110-03	DIODE RD7.5ES-B2	
C1414	1-124-907-11	ELECT 10MF	20% 50V	D1419	8-719-110-03	DIODE RD7.5ES-B2	
C1415	1-137-098-11	FILM 0.1MF	10% 100V	D1420	8-719-110-03	DIODE RD7.5ES-B2	
C1416	1-137-098-11	FILM 0.1MF	10% 100V	D1421	8-719-110-03	DIODE RD7.5ES-B2	
C1417	1-124-120-11	ELECT 220MF	20% 16V	D1422	8-719-110-03	DIODE RD7.5ES-B2	
C1418	1-163-003-11	CERAMIC CHIP 330PF	10% 50V	D1423	8-719-110-03	DIODE RD7.5ES-B2	
C1419	1-163-003-11	CERAMIC CHIP 330PF	10% 50V	D1424	8-719-110-03	DIODE RD7.5ES-B2	
C1425	1-124-902-00	ELECT 0.47MF	20% 50V	D1425	8-719-110-03	DIODE RD7.5ES-B2	
C1426	1-124-902-00	ELECT 0.47MF	20% 50V	D1426	8-719-110-03	DIODE RD7.5ES-B2	
C1427	1-163-029-11	CERAMIC CHIP 0.0047MF	50V	D1501	8-719-300-33	DIODE RU-3AM	
C1428	1-163-029-11	CERAMIC CHIP 0.0047MF	50V				

# J1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D1502	8-719-911-19	DIODE ISS119		R233	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
D1503	8-719-911-19	DIODE ISS119		R234	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
D1504	8-719-911-19	DIODE ISS119		R235	1-216-295-00	METAL GLAZE	0 5% 1/10W
D1505	8-719-911-19	DIODE ISS119		R236	1-216-295-00	METAL GLAZE	0 5% 1/10W
D1506	8-719-982-33	DIODE MTZJ-36D		R240	1-216-033-00	METAL GLAZE	220 5% 1/10W
D1507	8-719-911-19	DIODE ISS119		R241	1-216-091-00	METAL GLAZE	56K 5% 1/10W
D1510	8-719-911-19	DIODE ISS119		R242	1-216-091-00	METAL GLAZE	56K 5% 1/10W
				R243	1-216-075-00	METAL GLAZE	12K 5% 1/10W
		<IC>		R244	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
IC201	8-759-013-17	IC TDA6200		R245	1-216-075-00	METAL GLAZE	12K 5% 1/10W
IC1401	8-752-053-17	IC CXA1114P		R246	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
IC1402	8-759-946-32	IC TEA2014A		R247	1-216-075-00	METAL GLAZE	12K 5% 1/10W
IC1403	8-759-140-53	IC UPD4053BC		R248	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
IC1501	8-759-942-16	IC TEA2031A		R249	1-216-075-00	METAL GLAZE	12K 5% 1/10W
				R250	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
		<JACK>		R1400	1-216-295-00	METAL GLAZE	0 5% 1/10W
J1402	1-561-534-41	SOCKET 21P		R1401	1-216-023-00	METAL GLAZE	82 5% 1/10W
J1403	1-561-534-41	SOCKET 21P		R1402	1-216-170-00	METAL GLAZE	68 5% 1/8W
		<TRANSISTOR>		R1403	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q201	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1404	1-216-178-00	METAL GLAZE	150 5% 1/8W
Q202	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1405	1-249-434-11	CARBON	27K 5% 1/4W
Q1401	8-729-216-22	TRANSISTOR 2SA1162-G		R1407	1-216-113-00	METAL GLAZE	470K 5% 1/10W
Q1402	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1408	1-216-089-00	METAL GLAZE	47K 5% 1/10W
Q1403	8-729-120-28	TRANSISTOR 2SC1623-L5L6		R1409	1-216-041-00	METAL GLAZE	470 5% 1/10W
Q1404	8-729-216-22	TRANSISTOR 2SA1162-G		R1410	1-216-089-00	METAL GLAZE	47K 5% 1/10W
		<RESISTOR>		R1411	1-216-041-00	METAL GLAZE	470 5% 1/10W
R201	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R1412	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R202	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W	R1413	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R203	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R1414	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R204	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R1415	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R205	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R1416	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R206	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R1417	1-216-023-00	METAL GLAZE	82 5% 1/10W
R207	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R1418	1-247-738-11	CARBON	82 5% 1/2W F
R208	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1419	1-216-295-00	METAL GLAZE	0 5% 1/10W
R209	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1420	1-216-295-00	METAL GLAZE	0 5% 1/10W
R210	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1421	1-216-295-00	METAL GLAZE	0 5% 1/10W
R211	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R1422	1-216-025-00	METAL GLAZE	100 5% 1/10W
R212	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1423	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R213	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1424	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R214	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1425	1-216-045-00	METAL GLAZE	680 5% 1/10W
R215	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1426	1-216-025-00	METAL GLAZE	100 5% 1/10W
R216	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R1427	1-216-001-00	METAL GLAZE	10 5% 1/10W
R217	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R1428	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R218	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1429	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R219	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1430	1-216-170-00	METAL GLAZE	68 5% 1/8W
R220	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R1431	1-216-041-00	METAL GLAZE	470 5% 1/10W
R221	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1432	1-216-041-00	METAL GLAZE	470 5% 1/10W
R222	1-216-041-00	METAL GLAZE	470 5% 1/10W	R1433	1-216-033-00	METAL GLAZE	220 5% 1/10W
R223	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1434	1-249-393-11	CARBON	10 5% 1/4W F
R224	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1437	1-249-434-11	CARBON	27K 5% 1/4W
R225	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1440	1-216-045-00	METAL GLAZE	680 5% 1/10W
R226	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R1441	1-216-045-00	METAL GLAZE	680 5% 1/10W
R227	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1442	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R228	1-216-033-00	METAL GLAZE	220 5% 1/10W	R1443	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R229	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R1444	1-216-033-00	METAL GLAZE	220 5% 1/10W
R230	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R1445	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R231	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1446	1-216-033-00	METAL GLAZE	220 5% 1/10W
R232	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R1447	1-216-033-00	METAL GLAZE	220 5% 1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK
R1455	1-216-180-00	METAL GLAZE	180	5%	1/8W		*A-1654-005-A	IFG BOARD, COMPLETE	*****		
R1457	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1459	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R1460	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W						
R1461	1-216-190-00	METAL GLAZE	470	5%	1/8W			<CAPACITOR>			
R1462	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	C1	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
R1463	1-216-049-00	METAL GLAZE	1K	5%	1/10W	C2	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
R1464	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	C3	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
R1465	1-216-023-00	METAL GLAZE	82	5%	1/10W	C4	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
R1466	1-216-033-00	METAL GLAZE	220	5%	1/10W	C5	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
R1467	1-216-025-00	METAL GLAZE	100	5%	1/10W	C6	1-163-031-11	CERAMIC CHIP	0.01MF	50V	
R1468	1-216-025-00	METAL GLAZE	100	5%	1/10W	C7	1-124-903-11	ELECT	1MF	20%	50V
R1469	1-216-025-00	METAL GLAZE	100	5%	1/10W	C8	1-124-907-11	ELECT	10MF	20%	50V
R1470	1-216-025-00	METAL GLAZE	100	5%	1/10W	C9	1-130-471-00	MYLAR	0.001MF	5%	50V
R1471	1-216-023-00	METAL GLAZE	82	5%	1/10W	C10	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
R1472	1-216-023-00	METAL GLAZE	82	5%	1/10W	C11	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
R1473	1-216-023-00	METAL GLAZE	82	5%	1/10W	C12	1-136-298-00	FILM	0.0033MF	2%	100V
R1474	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C13	1-124-477-11	ELECT	47MF	20%	16V
R1476	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C14	1-124-477-11	ELECT	47MF	20%	16V
R1477	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C15	1-124-477-11	ELECT	47MF	20%	16V
R1478	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C16	1-124-477-11	ELECT	47MF	20%	16V
R1480	1-216-190-00	METAL GLAZE	470	5%	1/8W	C17	1-124-907-11	ELECT	10MF	20%	50V
R1482	1-216-178-00	METAL GLAZE	150	5%	1/8W	C18	1-137-047-11	FILM	0.01MF	10%	400V
R1483	1-216-178-00	METAL GLAZE	150	5%	1/8W	C19	1-137-047-11	FILM	0.01MF	10%	400V
R1484	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C20	1-126-233-11	ELECT	22MF	20%	50V
R1485	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C21	1-126-233-11	ELECT	22MF	20%	50V
R1486	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C22	1-137-098-11	FILM	0.1MF	10%	100V
R1487	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	C23	1-137-031-11	FILM	0.22MF	10%	100V
R1488	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	C24	1-124-034-51	ELECT	33MF	20%	16V
R1489	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	C25	1-137-102-11	FILM	0.022MF	10%	250V
R1501	1-216-081-00	METAL GLAZE	22K	5%	1/10W	C26	1-137-094-11	FILM	0.047MF	10%	100V
R1502	1-216-083-00	METAL GLAZE	27K	5%	1/10W	C27	1-124-903-11	ELECT	1MF	20%	50V
R1503	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C28	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
R1504	1-216-085-00	METAL GLAZE	33K	5%	1/10W	C29	1-124-903-11	ELECT	1MF	20%	50V
R1505	1-216-081-00	METAL GLAZE	22K	5%	1/10W	C30	1-124-903-11	ELECT	1MF	20%	50V
R1506	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C31	1-137-047-11	FILM	0.01MF	10%	400V
R1509	1-216-105-00	METAL GLAZE	220K	5%	1/10W	C32	1-130-479-00	MYLAR	0.0047MF	5%	50V
R1510	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	C33	1-163-081-00	CERAMIC CHIP	0.22MF	25V	
R1511	1-216-049-00	METAL GLAZE	1K	5%	1/10W	C34	1-137-031-11	FILM	0.22MF	10%	100V
R1512	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C35	1-124-907-11	ELECT	10MF	20%	50V
R1513	1-216-091-00	METAL GLAZE	56K	5%	1/10W	C36	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
R1514	1-216-049-00	METAL GLAZE	1K	5%	1/10W	C37	1-124-477-11	ELECT	47MF	20%	16V
R1515	1-216-117-00	METAL GLAZE	680K	5%	1/10W	C38	1-124-477-11	ELECT	47MF	20%	16V
R1516	1-216-079-00	METAL GLAZE	18K	5%	1/10W	C39	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
R1517	1-216-033-00	METAL GLAZE	220	5%	1/10W						
R1519	1-216-101-00	METAL GLAZE	150K	5%	1/10W						
R1520	1-216-113-00	METAL GLAZE	470K	5%	1/10W						
R1521	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W						
R1556	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W						

### **<VARIABLE RESISTOR>**

RV1501	1-238-023-11	RES,	ADJ,	CARBON	470K
RV1502	1-238-016-11	RES,	ADJ,	CARBON	10K
RV1503	1-238-017-11	RES,	ADJ,	CARBON	22K
RV1504	1-238-012-11	RES,	ADJ,	CARBON	1K
RV1505	1-238-023-11	RES,	ADJ,	CARBON	470K
RV1506	1-238-017-11	RES,	ADJ,	CARBON	22K
RV1507	1-238-009-11	RES,	ADJ,	CARBON	220
RV1508	1-238-016-11	RES,	ADJ,	CARBON	10K
RV1509	1-238-023-11	RES,	ADJ,	CARBON	470K

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**IFG**

The components identified by shading and mark **Δ** are critical for safety.  
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION						REMARK
<FILTER>								
CDA1	1-404-751-11	DISCRIMINATOR, CERAMIC						
CDA2	1-404-750-11	DISCRIMINATOR, CERAMIC						
SFT1	1-527-840-00	FILTER, CERAMIC						
SFT2	1-527-839-00	FILTER, CERAMIC						
<DIODE>								
D3	8-719-400-18	DIODE MA152WK						
<IC>								
IC1	8-759-003-90	IC TBA129						
IC2	8-759-003-90	IC TBA129						
IC3	8-759-030-48	IC TDA6600-2						
IC4	8-759-513-48	IC TDA2595/V9						
<CONNECTOR>								
IFG13	*1-565-488-11	CONNECTOR, BOARD TO BOARD 12P						
<COIL>								
L1	1-408-410-00	INDUCTOR	12UH					
L2	1-408-410-00	INDUCTOR	12UH					
L3	1-410-064-11	INDUCTOR	2.7MMH					
L4	1-408-421-00	INDUCTOR	100UH					
L5	1-408-421-00	INDUCTOR	100UH					
<TRANSISTOR>								
Q2	8-729-901-00	TRANSISTOR DTC124EK						
Q3	8-729-216-22	TRANSISTOR 2SA1162-G						
Q4	8-729-901-00	TRANSISTOR DTC124EK						
<RESISTOR>								
JR8	1-216-296-00	METAL GLAZE	0	5%	1/8W			
JR10	1-216-296-00	METAL GLAZE	0	5%	1/8W			
R1	1-216-045-00	METAL GLAZE	680	5%	1/10W			
R2	1-216-043-00	METAL GLAZE	560	5%	1/10W			
R3	1-216-043-00	METAL GLAZE	560	5%	1/10W			
R5	1-216-045-00	METAL GLAZE	680	5%	1/10W			
R6	1-216-043-00	METAL GLAZE	560	5%	1/10W			
R7	1-216-043-00	METAL GLAZE	560	5%	1/10W			
R9	1-216-073-00	METAL GLAZE	10K	5%	1/10W			
R11	1-216-095-00	METAL GLAZE	82K	5%	1/10W			
R12	1-216-097-00	METAL GLAZE	100K	5%	1/10W			
R13	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W			
R15	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W			
R16	1-216-097-00	METAL GLAZE	100K	5%	1/10W			
R17	1-216-097-00	METAL GLAZE	100K	5%	1/10W			
R18	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W			
R19	1-216-097-00	METAL GLAZE	100K	5%	1/10W			
R20	1-216-075-00	METAL GLAZE	12K	5%	1/10W			
R22	1-216-099-00	METAL GLAZE	120K	5%	1/10W			
R24	1-216-089-00	METAL GLAZE	47K	5%	1/10W			
R25	1-216-077-00	METAL GLAZE	15K	5%	1/10W			
<VARIABLE RESISTOR>								
RV1	1-238-016-11	RES, ADJ, CARBON 10K						

**Sony Corporation**  
**TV Group**

English  
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